Work Plan
Interim Action
2010 Focused Soil Excavation
North Boeing Field
Seattle, Washington

August 20, 2010

Prepared for

The Boeing Company
Seattle, WA

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APPENDICES

1.0 INTRODUCTION

This document presents a work plan to conduct an interim action focused soil excavation on property leased by The Boeing Company (Boeing) at North Boeing Field (NBF) in Seattle, Washington. NBF is located east of East Marginal Way South adjacent to the King County Airport and the City of Seattle Georgetown Steam Plant (GTSP) (Figure 1). The interim action will be conducted by Boeing. The objective of the interim action is to remove accessible soil with concentrations of polychlorinated biphenyls (PCBs) greater than 1.0 milligram per kilogram (mg/kg) in locations near the boundary with the GTSP property (fenceline area) located within the Propulsion Engineering Labs (PEL) area at NBF, as required by the Washington State Department of Ecology (Ecology; 2010). In addition, soil in the Building 3-302 area will be excavated in connection with replacement of the storm drain line in that area. Boeing will, to the extent practicable, aim to achieve Ecology's goal of total PCB concentration of 0.5 mg/kg in all soil within the excavation bounds. The planned excavation areas were identified based on the results of sampling conducted during the Focused Soil Investigation in July and August 2010 (Landau Associates 2010) and are presented on Figure 2. The Focused Soil Investigation data indicate that PCBs at concentrations above 1.0 mg/kg and 0.5 mg/kg are generally present only in shallow soil [4 feet (ft) or less below ground surface (BGS)], although PCBs above these concentrations extend to the 4 to 6 ft depth interval in the Toxic Substances Control Act (TSCA) excavation area shaded in blue on Figure 2. Total PCB concentration results for soil samples collected during the Focused Soil Investigation are also presented on Figure 2; analytical data tables from the Focused Soil Investigation are provided in Appendix A. Sampling activity descriptions and investigation results that provided the basis for determining areas for soil removal will be documented in an investigation report to be submitted separately from this work plan.

Ecology has told Boeing that soil in the fenceline area must be excavated during the 2010 construction season. This work plan was originally submitted to Ecology for review on July 13, 2010, prior to receipt of the Focused Soil Investigation results to expedite the agency approval process in accordance with the NBF/GTSP Agreed Order (Ecology 2008). Ecology comments on the original work plan and results from the Focused Soil Investigation have been incorporated into this work plan for submittal to and approval by the U.S. Environmental Protection Agency (EPA) under TSCA and Ecology. Based on the Focused Soil Investigation results, time and access limitations, and in order to comply with Ecology's requirement to remove soil during the current 2010 construction season, it is not expected that soil excavation will extend below the depth of the groundwater table in any of the excavation areas except possibly the storm drain replacement area. The excavation extent and depth may be limited by the presence of buildings and utilities; the excavation will not endanger the integrity of existing building

foundations, storm drain lines, or other existing utilities in the areas of excavation. No buildings or equipment will be demolished or removed as part of the excavation activities described in this work plan.

Seattle City Light (City) is also in the process of planning and initiating interim action activities on the GTSP property adjacent to the fenceline area at NBF (Seattle City Light 2010). Boeing will work with the City to maximize the efficiency and effectiveness of the excavation of soil in the fenceline area to the extent practicable. It is possible that the extent of the excavation near the NBF/GTSP fenceline may be increased based on results from City excavations. To the extent that coordination with the City's planned excavation at GTSP is not possible, the effectiveness of the cleanup and the ability to achieve the goal of 0.5 mg/kg in some areas near the NBF/GTSP fenceline may be limited.

Removal and disposal of soil with total PCB concentrations that were found to be greater than or equal to 50 mg/kg during the July and August 2010 sampling event will be conducted in accordance with TSCA under the requirements of the self-implementing procedures for the cleanup and disposal of PCB remediation waste [40 C.F.R. § 761.61(a)]. Procedures for soil excavation activities, field documentation, confirmation sample collection and designation, chemical analysis, equipment decontamination, waste disposal, and reporting for this material are described in Section 2.

Soil identified during sampling events as having concentrations greater than 1.0 mg/kg, but less than 50 mg/kg, will be excavated in compliance with Model Toxics Control Act (MTCA) requirements and as an interim action in accordance with the NBF/GTSP Agreed Order. While excavation bounds were determined using a PCB concentration of 1 mg/kg, Boeing will attempt to remove all soil in the excavation areas with a total PCB concentration greater than 0.5 mg/kg. Procedures for soil excavation activities, field documentation, confirmation sample collection and designation, chemical analysis, equipment decontamination, and waste disposal for this material are described in Section 3.

Some soil samples were analyzed to determine concentrations of one or more other chemical classes: metals, semivolatile organic compounds, volatile organic compounds, and petroleum hydrocarbons. The results of those analyses did not indicate a need to revise the planned excavation areas.

A health and safety plan that will be used for all activities described in this work plan is discussed in Section 4. Reporting is discussed in Section 5; the schedule is discussed in Section 6.

2.0 SOIL WITH PCBS GREATER THAN OR EQUAL TO 50 MG/KG

Total PCB concentration data from sampling of soil from the fenceline area and the Building 3-302 area during the July and August 2010 Focused Soil Investigation was used to identify locations where PCB concentrations are greater than or equal to 50 mg/kg; excavation of these locations will be conducted in accordance with TSCA. PCB results and the planned excavation areas for TSCA soil are presented on Figure 2. Actual excavation areas may be adjusted based on confirmation sample results, presence of utilities, and field conditions. Soil with total PCB concentrations greater than or equal to 50 mg/kg will be removed and disposed as waste under TSCA in accordance with the self-implementing cleanup and disposal procedures [40 CFR 761.61(a)]. Specific procedures for cleanup of TSCA-regulated remediation waste are described in the following sections.

2.1 REMOVAL OF SOIL WITH PCBS GREATER THAN OR EQUAL TO 50 MG/KG

The following section provides information on excavation of TSCA-regulated remediation waste located at NBF that was identified during the Focused Soil Investigation. As discussed in Section 1.0, a total PCB soil concentration of 0.5 mg/kg will be used as a target remediation level for this soil removal, consistent with Ecology's goal for the project. Due to the large number of subsurface utilities present at the site and the close proximity of the planned excavation to buildings and industrial equipment located within this area, it is possible that this target will not be achieved in all areas; the excavation will not endanger the integrity of existing building foundations, storm drain lines, or other existing utilities in the areas of excavation. Based on the existing soil data, the excavation of TSCA-regulated soil is planned to extend to 6 ft BGS. This is anticipated to be above or at the groundwater level during late September; however, excavation will be extended below the groundwater level, if practicable, to achieve the target remediation level. The need to protect existing utilities and buildings may limit the actual excavation depth. Shoring or dewatering of excavations is not planned during this interim action. If soil cannot be excavated or if it is otherwise impracticable to remove contaminated material to achieve the target remediation level, other controls have been identified as a contingency under 40 C.F.R. § 761.61(a)(3)(D). The potential contingent activities include paving the affected areas with an asphalt cap per 40 C.F.R. § 761.61(a)(7) in accordance with 40 C.F.R. § 264.310(a) and 40 C.F.R. § 761.75(b)(1)(ii) through (b)(1)(v), and fencing and signage in accordance with 40 C.F.R. § 761.61(a)(4)(B)(2). In addition, where the presence of groundwater or obstructions limit the depth of excavation and soil concentrations remain above 0.5 mg/kg, a layer of activated carbon and geofabric will be placed prior to backfilling. The activated carbon/geofabric barrier will provide treatment of groundwater that may rise

above excavation elevations, and provide a separation of clean fill material and contaminated soil in the event future explorations or excavations are required.

Excavated soil with total PCB concentrations greater than or equal to 50 mg/kg will be managed separately from soil with total PCB concentrations less than 50 mg/kg; soil with PCB concentrations greater than or equal to 50 mg/kg will be managed and disposed as TSCA waste. As described above, the approximate area of soil to be removed as TSCA waste as delineated during the Focused Soil Investigation is provided on Figure 2.

Soil will be removed by contracted personnel using a combination of excavation machinery, digging bars, and shovels. Excavated soil will be transferred to a lined roll-off box for shipment to the Waste Management NW landfill in Arlington, Oregon, a chemical waste landfill permitted to accept TSCA waste under 40 C.F.R. § 761.75.

All equipment used for excavation that contacts TSCA-regulated material will be decontaminated using solvent soap washing techniques and/or wipe sampled in accordance with the decontamination procedures required under 40 C.F.R. § 761.79 or will alternatively be discarded as contaminated TSCA waste into the roll-off box to be disposed of at the Waste Management NW landfill in the same manner as TSCA-regulated soil described above.

2.2 CONFIRMATION SAMPLE COLLECTION PROCEDURES

Confirmation samples will conform to 40 C.F.R. § 761.61(a)(6) and will be collected from all areas below locations where soil with total PCB concentrations equal to or greater than 50 mg/kg are removed. Self-implementing cleanup is complete when verification sampling yields PCB results less than or equal to the target remediation level of 0.5 mg/kg. In the event that confirmation sampling yields concentrations greater than this level, additional excavation will be initiated per 40 C.F.R. § 761.61(a)(6)(ii)(B) and/or contingency measures will be implemented to prevent the potential migration or exposure of PCBs.

Confirmation soil samples will be collected according to a 1.5-meter grid overlay system as defined in 40 C.F.R. § 761.280(b)(2). A sample will be collected from each grid intersection in the area of soil excavation. The exact orientation of the grid and number of confirmation samples to be collected will be determined in the field and will be based on magnetic north. Additional confirmation samples, including deeper soil samples, may be collected, as needed, depending on sampling results. In the event that confirmation samples yield total PCB concentrations greater than the target remediation level, soil excavation will proceed vertically or horizontally to the extent practicable (i.e., additional excavation of soil is possible and does not endanger utilities or building foundations) and the confirmation sampling

procedures will be repeated. Confirmation soil samples will be collected using a clean, stainless-steel spoon. Soil samples will be placed into an 8-ounce glass sample jar, labeled, and stored on ice.

2.3 SAMPLE DOCUMENTATION, HANDLING, AND ANALYSIS

A complete record of all field activities will be maintained. All recordkeeping will conform to 40 C.F.R. § 761.61(a)(9) and 40 C.F.R § 761.125(c)(5). Documentation will include field logbooks, field sampling forms, photographs, sample labels, chain-of-custody (COC) forms, and project and data management file copies. Field logbooks will be used to record all field activities. Confirmation sample locations will be photo-documented with a digital camera, with some identification of the sample location in the photograph. Sample possession and handling will be documented so that the sample is traceable from the time of sample collection, to the laboratory, and through data analysis.

2.4 CHEMICAL ANALYSES

Confirmation samples will be transported to Boeing's contracted analytical laboratory, Analytical Resources Inc. (ARI), in Tukwila, Washington, within 24 hours of sample collection. All samples will be analyzed for PCB aroclors by EPA Method 8082 in accordance with 40 C.F.R. § 761.272. The anticipated reporting limit for PCB aroclors is 35 micrograms per kilogram (µg/kg). Actual reporting limits may be higher or lower depending on laboratory interferences and other aroclor detections. Sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures to be used are described in ARI's standard operating procedures (SOPs) SOP 350S and SOP 403S. Copies of these SOPs are provided in Appendix B.

2.5 SAMPLE LABELING, SHIPPING, AND CHAIN-OF-CUSTODY

Each soil sample will be assigned a unique alphanumeric identifier that will include the sampling event identifier IAFE for Interim Action Focused Excavation, the sample location identification, the depth of the sample BGS, and the date in month-day-year format. For example, the first soil sample collected from location S01, from 2.0 to 2.5 ft BGS, on September 27, 2010, will be identified as IAFE-S01-2.0-2.5-092710.

Sample container labels will be completed immediately before or immediately following sample collection. Container labels and COC forms will include the project name (Boeing NBF), the Boeing project manager's name (Carl Bach), the project number (025082.210.008), the sample ID, the initials of the person collecting the sample, the date and time of collection, and the analysis required. Samples will be placed on ice in a sealed cooler immediately after collection and delivered or sent by courier to ARI by Landau Associates within 24 hours of sample collection. All samples submitted for analysis will be

accompanied by a COC form, and all samples submitted to the laboratory that are not immediately analyzed will be frozen for archival purposes.

2.6 REPORTING

Upon completion of excavation activities, a report documenting the activities will be prepared that meets the requirements referenced at 40 C.F.R. § 761.61(a)(9) and 40 C.F.R § 761.125(c)(5). Reporting is further described in Section 5.

3.0 SOIL WITH PCBS LESS THAN 50 MG/KG

Results from sampling of soil from the fenceline area and the Building 3-302 area during the Focused Soil Investigation was used to identify locations where PCB concentrations are greater than 1 mg/kg but less than 50 mg/kg; excavation of these locations will be conducted in accordance with MTCA as described in Section 1.0. Locations where soil with PCB concentrations greater than 1 mg/kg was found and the planned excavation areas based on those results are presented on Figure 2. Actual excavation areas may be adjusted based on confirmation sample results, presence of utilities, and field conditions. Specific procedures for excavation of soil with PCB concentrations less than 50 mg/kg are outlined in the following sections.

3.1 REMOVAL OF SOIL WITH PCBS LESS THAN 50 MG/KG

The following section provides information on excavation of soil that was identified during the Focused Soil Investigation as having PCB concentrations less than 50 mg/kg, but greater than 1.0 mg/kg. As discussed in Section 1.0, Boeing will use a concentration of 1 mg/kg to identify areas to be excavated, consistent with the concentration proposed by the City for the GTSP excavation; however, a total PCB soil concentration of 0.5 mg/kg will be used as a target remediation level for the excavation, consistent with Ecology's goal for the project. Due to the large number of subsurface utilities present at the site and the close proximity of the planned excavation to buildings and industrial equipment located within this area, it is possible that this target will not be achieved in all areas; the excavation will not endanger the integrity of existing building foundations, storm drain lines, or other existing utilities in the areas of excavation. Based on the existing soil data, the excavation is planned to extend to 4 ft BGS. This is anticipated to be above the groundwater level during late September; however, excavation will be extended below the groundwater level, if practicable, to achieve the target remediation level. The need to protect existing utilities and buildings may limit the actual excavation depth. Shoring or dewatering of excavations is not planned during this interim action. Where confirmation sampling indicates soil remains at concentrations greater than 0.5 mg/kg and, due to buildings, utilities, or large equipment, the soil cannot be excavated or it is otherwise impracticable to remove contaminated material, other control measures will be evaluated to protect human health and the environment and prevent exposure to material remaining at elevated concentrations, such as paving the affected areas with an asphalt cap or the application of the geofabric and carbon prior to backfilling. Where the presence of groundwater or obstructions limit the depth of excavation and soil concentrations remain above 0.5 mg/kg, a layer of activated carbon and geofabric will be placed prior to backfilling. The activated carbon/geofabric barrier will provide treatment of groundwater that may rise above excavation elevations, and provide a separation of clean fill material and contaminated soil in the event future explorations or excavations are required.

During sampling activities for the Focused Soil Investigation, a large concrete pad was encountered at approximately 2 ft BGS in the areas of SB40, SB41, SB22, SB08, SB39, and SB37. During excavation in this area, the concrete pad will be exposed and soil samples from beneath the pad will be analyzed for PCBs. In the event concentrations are identified greater than 0.5 mg/kg, the concrete pad will be removed and excavation will extend in the vertical direction to the extent practicable.

Pea gravel placed as fill material after removal of former underground tank UBF-27 was observed east of former oil/water separator OWS186 during the Focused Soil Investigation. Prior to excavation in this area, the asphalt paving will be removed and the extent of the pea gravel will be determined. Excavation activities will be accomplished in a manner to minimize disturbance of the existing pea gravel and thereby avoid the potential for spillage of pea gravel into the planned excavation.

Soil will be removed by contracted personnel using a combination of excavation machinery, digging bars, and shovels. Excavated soil will be transported under bill of lading to an appropriate disposal facility.

3.2 CONFIRMATION SAMPLE COLLECTION PROCEDURES

Confirmation soil samples will be collected in the fenceline area and Building 3-302 area following soil excavation to confirm that soil with PCB concentrations greater than 0.5 mg/kg has been removed to the extent practicable. Confirmation samples will be collected from the excavation bottom and side walls at intervals appropriate to demonstrate removal of contaminated soil. The number of confirmation samples to be collected will be determined in the field based on the depth and extent of the excavation and locations of obstructions (i.e., equipment, pillars). One soil sample will be collected from each location. Soil samples will be collected using a clean, stainless-steel spoon. Soil samples from each location will be placed into an 8-ounce glass sample jar, labeled, and stored on ice.

Additional confirmation samples, including deeper soil samples, may be collected, as needed, depending on sampling results. In the event that confirmation samples yield analytical PCB concentrations greater than the remediation level, additional soil excavation will occur to the extent practicable and the confirmation sampling procedures will be repeated.

3.3 SAMPLE DOCUMENTATION, HANDLING, AND ANALYSIS

A complete record of all field activities will be maintained. Documentation will include field logbooks, field sampling forms, photographs, sample labels, COC forms, and project and data management file copies. Field logbooks will be used to record all field activities. Additional characterization and confirmation sample locations will be photo-documented with a digital camera, with some identification of the sample location in the photograph. Sample possession and handling will be

documented so that the sample is traceable from the time of sample collection, to the laboratory, and through data analysis.

3.4 CHEMICAL ANALYSES

Samples will be transported to Boeing's contracted analytical laboratory, ARI, in Tukwila, Washington, within 24 hours of sample collection. All solids samples will be analyzed for PCB aroclors by EPA Method 8082. The anticipated reporting limit for PCB aroclors is 35 µg/kg. Actual reporting limits may be higher or lower depending on laboratory interferences and other aroclor detections. Sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures to be used are described in ARI's SOP 350S and SOP 403S. Copies of these SOPs are provided in Appendix B.

3.5 SAMPLE LABELING, SHIPPING, AND CHAIN-OF-CUSTODY

Each soil sample will be assigned a unique alphanumeric identifier that will include the sampling event identifier IAFE for Interim Action Focused Excavation, the sample location identification, the depth of the sample BGS, and the date in month-day-year format. For example, the first soil sample collected from location S01, from 2.0 to 2.5 ft BGS, on September 27, 2010, will be identified as IAFE-S01-2.0-2.5-092710.

Sample container labels will be completed before or immediately following sample collection. Container labels and COC forms will include the project name (Boeing NBF), the Boeing project manager's name (Carl Bach), the project number (025082.210.008), the sample ID, the initials of the person collecting the sample, the date and time of collection, and the analysis required. Samples will be placed on ice in a sealed cooler immediately after collection and delivered or sent by courier to ARI by Landau Associates within 36 hours of sample collection. All samples submitted for analysis will be accompanied by a COC form, and all samples submitted to the laboratory that are not immediately analyzed will be frozen for archival purposes.

4.0 HEALTH AND SAFETY PLAN

A Health and Safety Plan (HASP) for NBF was generated on September 8, 2008 and updated for the activities included in this work plan on June 25, 2010. This HASP covers the work areas and types of work that will occur in this interim action and will be used for this project. A copy of the Health and Safety Plan is provided in Appendix C.

5.0 REPORTING

Landau Associates will prepare a cleanup report documenting the implementation of this work plan. The cleanup report will include the date and time the cleanup was completed, a description of the excavation locations, pre-excavation sampling data used to delineate contamination and the areas of TSCA/non-TSCA excavations, the approximate depth of soil excavation and amount of soil removed, and post-cleanup verification sampling data including the sampling methodology and analytical techniques used. The report will also include laboratory data reports, summary tables of validated confirmation sample data, and figures showing final cleanup areas and results.

6.0 SCHEDULE

The cleanup activities described in this work plan are currently anticipated to be conducted in early fall 2010 following regulatory approval, including EPA approval of or completion of the 30-day self-implementing cleanup review period for the TSCA portion of this work plan for cleanup of PCB remediation waste and Ecology approval of the work plan as an interim action under the Administrative Order. Cleanup activities are expected to begin in September and to require approximately 30 days to complete, depending on weather conditions and confirmation sample results. Excavation activities in the storm drain line replacement area near Building 3-302 will begin after Ecology approval of this workplan but may occur prior to approval from EPA for the TSCA excavation area in the fenceline area to facilitate completion of excavation activities during the dry season. All samples collected for determining the extent of additional soil excavation will be submitted to the laboratory on a requested 48-hr turnaround time to expedite decision making and cleanup processes. The draft cleanup report will be submitted to EPA and Ecology approximately 4 weeks after receipt of final confirmation sample results.

* * * * * * * *

This work plan has been prepared for the exclusive use of The Boeing Company and applicable regulatory agencies for specific application to the NBF locality. No other party is entitled to rely on the information and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

This document has been prepared under the supervision and direction of the following key staff.

LANDAU ASSOCIATES, INC.

Kristy J. Hendrickson, P.E.
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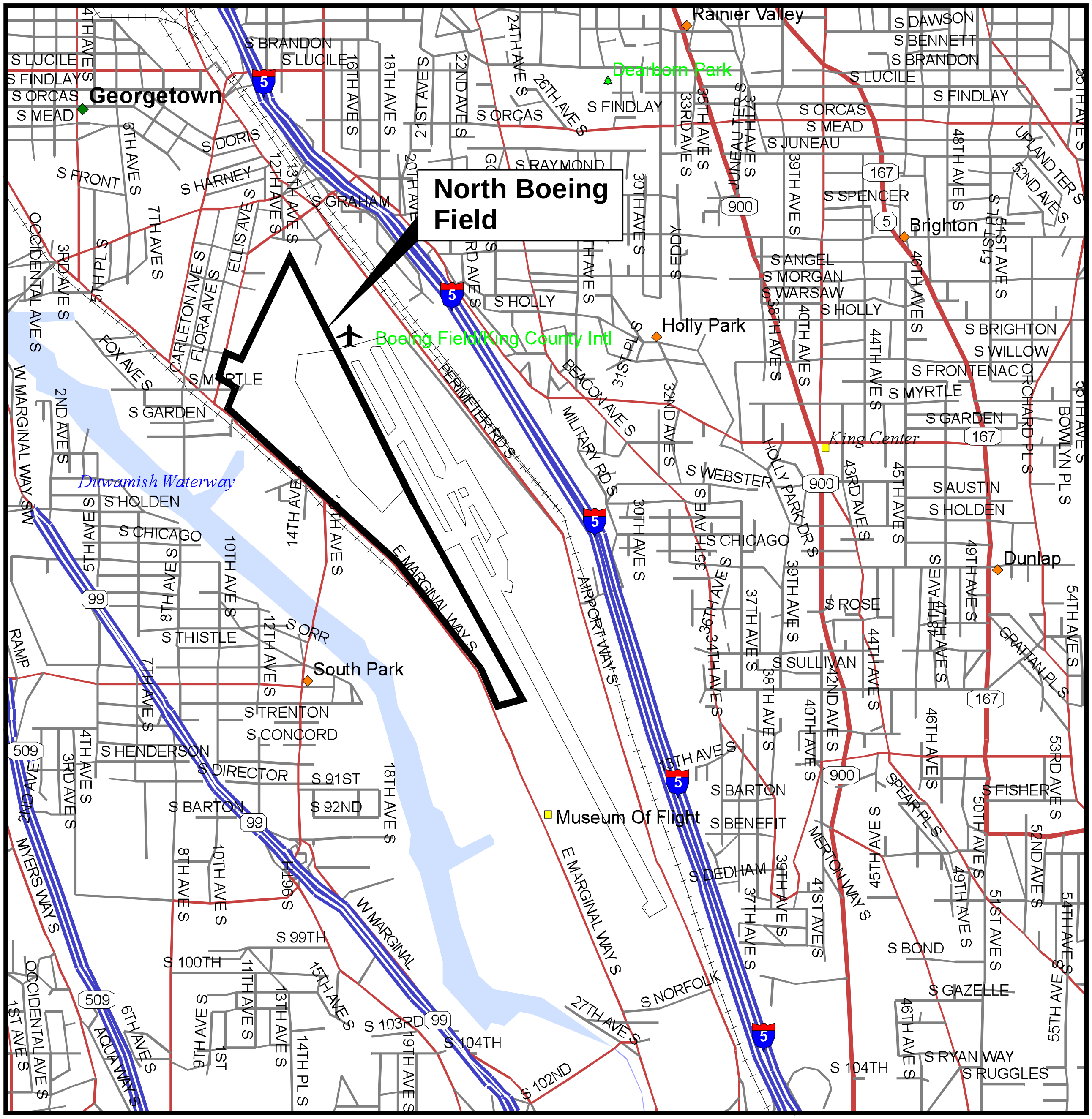
7.0 REFERENCES

Ecology. 2010. Letter to Carl Bach, The Boeing Company, re: *Interim Action – Removal of Contaminated Soils, North Boeing Field/Georgetown Steam Plant Agreed Order No. DE 5685*. Mark Edens, Project Manager, Washington State Department of Ecology, Bellevue, Washington. June 18.

Ecology. 2008. *North Boeing Field/Georgetown Steam Plant Agreed Order No. DE 5685*. In the Matter of Remedial Action by: The Boeing Company, King County and the City of Seattle. State of Washington, Department of Ecology. Effective Date August 14, 2008.

Landau Associates. 2010. *Work Plan, Focused Soil Investigation 2010, North Boeing Field, Seattle, Washington*. Prepared for The Boeing Company. June 25.

Seattle City Light. 2010. Letter to Mark Edens, Washington State Department of Ecology, Bellevue, WA, re: *Georgetown Steam Plant: Addendum to May 14, 2010 Georgetown Steam Plant Site Characterization Work Plant.* Jennie Goldberg, Environmental Affairs Division, Seattle City Light. July 7.



Map from DeLorme Street Atlas USA, 2002

0 ½ 1
Scale in Miles

Flume Realignment| V:\025\082\089\SD Structure & Surface Solids Investigation\Figure 1.cdr 8/29/2009

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North Boeing Field Seattle, Washington	**Vicinity Map**	Figure 1

Georgetown Steam Plant

LAI-SB01	7/13/2010
Depth	Total PCBs
0-2	0.2

LAI-SB03	7/13/2010
Depth	Total PCBs
0-2	0.43
2-4	0.65

LAI-SB42	8/3/2010
Depth	Total PCBs
0-2	264
2-4	560
4-6	100
6-8	0.037

LAI-SB46	8/3/2010
Depth	Total PCBs
0-2	320
2-4	0.105
4-6	1.79

LAI-SB07	7/13/2010
Depth	Total PCBs
0-2	3.2
2-4	640
4-6	2300
6-8	0.26

LAI-SB44[a]	8/3/2010
Depth	Total PCBs
0-2	3.1

LAI-SB40[a]	8/3/2010
Depth	Total PCBs
0-2	9.2

LAI-SB41[a]	8/3/2010
Depth	Total PCBs
0-2	2.06

LAI-SB12	7/14/2010
Depth	Total PCBs
0-2	0.26
2-4	0.215
6-8	0.054

LAI-SB28	7/15/2010
Depth	Total PCBs
0-2	0.036

LAI-SB29	7/15/2010
Depth	Total PCBs
0-2	0.146

LAI-SB30[c]	7/15/2010
Depth	Total PCBs
0-2	5.3
2-4	0.53

LAI-SB43	8/3/2010
Depth	Total PCBs
0-2	0.146
2-4	1.25
4-6	0.4
6-8	0.036

LAI-SB022[b]	7/15/2010
Depth	Total PCBs
2-4	0.22

LAI-SB08[a]	7/15/2010
Depth	Total PCBs
0-2	8.9

LAI-SB05	7/13/2010
Depth	Total PCBs
0-2	0.065

LAI-SB39	8/3/2010
Depth	Total PCBs
0-2	1.05

LAI-SB31	7/15/2010
Depth	Total PCBs
0-2	0.85
4-6	0.034

LAI-SB04	7/13/2010
Depth	Total PCBs
0-2	5.4
2-4	0.47
4-6	0.108

LAI-SB37[a]	8/3/2010
Depth	Total PCBs
0-2	0.44

LAI-SB35	8/3/2010
Depth	Total PCBs
0-2	1.4
2-4	0.07

LAI-SB24	7/15/2010
Depth	Total PCBs
0-2	0.035

LAI-SB38	8/3/2010
Depth	Total PCBs
0-2	0.047

LAI-SB06	7/15/2010
Depth	Total PCBs
0-2	0.091

LAI-SB14	7/14/2010
Depth	Total PCBs
0-2	0.36

LAI-SB11	7/14/2010
Depth	Total PCBs
0-2	0.318

LAI-SB16	7/14/2010
Depth	Total PCBs
0-2	0.034
2-4	0.039

LAI-SB09	7/14/2010
Depth	Total PCBs
0-2	0.072
4-6	0.41
6-8	0.138

LAI-SB17	7/15/2010
Depth	Total PCBs
0-2	0.046

3-333 3-323 3-334 3-331 3-302 3-626 3-306 3-322 3-326 3-353

CB165 LAI-SB32 LAI-SB02 LAI-SB34 LAI-SB26 LAI-SB27 MH652 LAI-SB33 LAI-SB25 OWS-186 LAI-SB23 LAI-SB36 LAI-SB21 LAI-SB10 LAI-SB15 LAI-SB19 LAI-SB20 LAI-SB13 LAI-SB18[b]

Notes

1. All locations had soil samples collected to 8ft BGS, at 2ft intervals, unless otherwise noted.
   a. Samples at these locations were only collected to a depth of 2ft BGS due to refusal.
   b. Samples at the locations were only collected to a depth of 6ft BGS due to equipment restrictions in confined spaces and the unconfined, saturated nature of the soils.
   c. Samples at the locations were only collected to a depth of 4ft BGS due to equipment restrictions in confined spaces and the unconfined, saturated nature of the soils.
2. Only detects are reported in data boxes; non-detects are not shown.
3. All results reported in mg/kg.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Compound Not Detected
- PCB Result ≤ 1.0 mg/kg
- 1 mg/kg < PCB Result < 50 mg/kg
- 50 mg/kg ≤ PCB Result
- Manhole
- Catch Basin
- North Lateral
- North-Central Lateral
- Other lines
- Building 3-302 Area
- Fenceline Area
- PEL Boundary
- Seattle City Light Property Boundary (County Assessor, 2010)
- Non-TSCA Excavation Area or Sample Location to be Removed as Non-TSCA Waste
- TSCA Excavation Area or Sample Location to be Removed as TSCA Waste
- Storm Drain Line Replacement / Soil Removal Area

0 50 100

Scale in Feet

Y:\Projects\025082\MapDocs\Focused Investigation\Fig2-PCB&Excavation.mxd 8/20/2010 NAD 1983 StatePlane Washington North FIPS 4601 Feet

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North Boeing Field
Seattle, Washington

Proposed Excavation Areas and Focused Investigation Soil Sample Locations with Total PCB Results

Figure 2

APPENDIX A

Focused Soil Investigation Analytical Data Table

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB01(0-2) RD89A 7/13/2010	SB01(2-4) RD89B 7/13/2010	SB01(4-6) RE13A 7/14/2010	SB01(6-8) RE13B 7/14/2010	SB02(0-2) RD89C 7/13/2010	SB02(2-4) RD89D 7/13/2010	SB02(4-6) RE13C 7/14/2010	SB02(6-8) RE13D 7/14/2010	SB03(0-2) RD89E 7/13/2010	SB03(2-4) RD89F 7/13/2010	SB03(4-6) RE13E 7/14/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.032 U	0.031 U	0.033 U	0.031 U	0.030 U	0.031 U	0.030 U	0.033 U	0.031 U	0.032 U	0.032 U
Aroclor 1242	0.032 U	0.031 U	0.033 U	0.031 U	0.030 U	0.031 U	0.030 U	0.033 U	0.031 U	0.032 U	0.032 U
Aroclor 1248	0.063 U	0.031 U	0.033 U	0.031 U	0.030 U	0.031 U	0.030 U	0.033 U	0.077 U	0.097 U	0.032 U
Aroclor 1254	**0.2**	0.031 U	0.033 U	0.031 U	0.030 U	0.031 U	0.030 U	0.033 U	**0.43**	**0.65**	0.032 U
Aroclor 1260	0.039 U	0.031 U	0.033 U	0.031 U	0.030 U	0.031 U	0.030 U	0.033 U	0.046 U	0.097 U	0.032 U
Aroclor 1221	0.032 U	0.031 U	0.033 U	0.031 U	0.030 U	0.031 U	0.030 U	0.033 U	0.031 U	0.032 U	0.032 U
Aroclor 1232	0.032 U	0.031 U	0.033 U	0.031 U	0.030 U	0.031 U	0.030 U	0.033 U	0.031 U	0.032 U	0.032 U
Total PCBs	**0.2**	0.031 U	0.033 U	0.031 U	0.030 U	0.031 U	0.030 U	0.033 U	**0.43**	**0.65**	0.032 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic										**10**	
Cadmium										**0.7**	
Chromium										**14.7**	
Copper										**59.0**	
Lead										**57**	
Mercury										**0.18**	
Zinc										**81**	
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol						0.066 U					
Bis-(2-Chloroethyl) Ether						0.066 U					
2-Chlorophenol						0.066 U					
1,3-Dichlorobenzene						0.066 U					
1,4-Dichlorobenzene						0.066 U					
Benzyl Alcohol						0.33 U					
1,2-Dichlorobenzene						0.066 U					
2-Methylphenol						0.066 U					
2,2'-Oxybis(1-Chloropropane)						0.066 U					
4-Methylphenol						0.066 U					
N-Nitroso-Di-N-Propylamine						0.33 U					
Hexachloroethane						0.066 U					
Nitrobenzene						0.066 U					
Isophorone						0.066 U					
2-Nitrophenol						0.066 U					
2,4-Dimethylphenol						0.066 U					
Benzoic Acid						0.66 U					
bis(2-Chloroethoxy) Methane						0.066 U					
2,4-Dichlorophenol						0.33 U					
1,2,4-Trichlorobenzene						0.066 U					
Naphthalene						0.066 U					
4-Chloroaniline						0.33 U					

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB01(0-2) RD89A 7/13/2010	SB01(2-4) RD89B 7/13/2010	SB01(4-6) RE13A 7/14/2010	SB01(6-8) RE13B 7/14/2010	SB02(0-2) RD89C 7/13/2010	SB02(2-4) RD89D 7/13/2010	SB02(4-6) RE13C 7/14/2010	SB02(6-8) RE13D 7/14/2010	SB03(0-2) RD89E 7/13/2010	SB03(2-4) RD89F 7/13/2010	SB03(4-6) RE13E 7/14/2010
Hexachlorobutadiene						0.066 U					
4-Chloro-3-methylphenol						0.33 U					
2-Methylnaphthalene						0.066 U					
Hexachlorocyclopentadiene						0.33 U					
2,4,6-Trichlorophenol						0.33 U					
2,4,5-Trichlorophenol						0.33 U					
2-Chloronaphthalene						0.066 U					
2-Nitroaniline						0.33 U					
Dimethylphthalate						0.066 U					
Acenaphthylene						0.066 U					
3-Nitroaniline						0.33 U					
Acenaphthene						0.066 U					
2,4-Dinitrophenol						0.66 U					
4-Nitrophenol						0.33 U					
Dibenzofuran						0.066 U					
2,6-Dinitrotoluene						0.33 U					
2,4-Dinitrotoluene						0.33 U					
Diethylphthalate						0.066 U					
4-Chlorophenyl-phenylether						0.066 U					
Fluorene						0.066 U					
4-Nitroaniline						0.33 U					
4,6-Dinitro-2-Methylphenol						0.66 U					
N-Nitrosodiphenylamine						0.066 U					
4-Bromophenyl-phenylether						0.066 U					
Hexachlorobenzene						0.066 U					
Pentachlorophenol						0.33 U					
Phenanthrene						0.066 U					
Carbazole						0.066 U					
Anthracene						0.066 U					
Di-n-Butylphthalate						0.066 U					
Fluoranthene						0.066 U					
Pyrene						0.066 U					
Butylbenzylphthalate						0.066 U					
3,3'-Dichlorobenzidine						0.33 U					
Benzo(a)anthracene						0.066 U					
bis(2-Ethylhexyl)phthalate						0.066 U					
Chrysene						0.066 U					
Di-n-Octyl phthalate						0.066 U					
Benzo(b)fluoranthene						0.066 U					
Benzo(k)fluoranthene						0.066 U					
Benzo(a)pyrene						0.066 U					
Indeno(1,2,3-cd)pyrene						0.066 U					
Dibenz(a,h)anthracene						0.066 U					
Benzo(g,h,i)perylene						0.066 U					
1-Methylnaphthalene						0.066 U					

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB01(0-2) RD89A 7/13/2010	SB01(2-4) RD89B 7/13/2010	SB01(4-6) RE13A 7/14/2010	SB01(6-8) RE13B 7/14/2010	SB02(0-2) RD89C 7/13/2010	SB02(2-4) RD89D 7/13/2010	SB02(4-6) RE13C 7/14/2010	SB02(6-8) RE13D 7/14/2010	SB03(0-2) RD89E 7/13/2010	SB03(2-4) RD89F 7/13/2010	SB03(4-6) RE13E 7/14/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics	**120**					**73**					
Lube Oil	**500**					**220**					
NWTPH-Gx											
Gasoline Range Organics	7.3 U					14 U					
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane						0.0019 UJ					
Bromomethane						0.0019 UJ					
Vinyl Chloride						0.0019 U					
Chloroethane						0.0019 U					
Methylene Chloride						**0.0068**					
Acetone						**0.064**					
Carbon Disulfide						0.0019 U					
1,1-Dichloroethene						0.0019 U					
1,1-Dichloroethane						0.0019 U					
trans-1,2-Dichloroethene						0.0019 U					
cis-1,2-Dichloroethene						0.0019 U					
Chloroform						0.0019 U					
1,2-Dichloroethane						0.0019 U					
2-Butanone						0.0096 U					
1,1,1-Trichloroethane						0.0019 U					
Carbon Tetrachloride						0.0019 U					
Vinyl Acetate						0.0096 U					
Bromodichloromethane						0.0019 U					
1,2-Dichloropropane						0.0019 U					
cis-1,3-Dichloropropene						0.0019 U					
Trichloroethene						**0.12**					
Dibromochloromethane						0.0019 U					
1,1,2-Trichloroethane						0.0019 U					
Benzene						**0.0033**					
trans-1,3-Dichloropropene						0.0019 U					
2-Chloroethylvinylether						0.0096 U					
Bromoform						0.0019 U					
4-Methyl-2-Pentanone (MIBK)						0.0096 U					
2-Hexanone						0.0096 U					
Tetrachloroethene						**0.0046**					
1,1,2,2-Tetrachloroethane						0.0019 U					
Toluene						0.0019 U					
Chlorobenzene						0.0019 U					

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB01(0-2) RD89A 7/13/2010	SB01(2-4) RD89B 7/13/2010	SB01(4-6) RE13A 7/14/2010	SB01(6-8) RE13B 7/14/2010	SB02(0-2) RD89C 7/13/2010	SB02(2-4) RD89D 7/13/2010	SB02(4-6) RE13C 7/14/2010	SB02(6-8) RE13D 7/14/2010	SB03(0-2) RD89E 7/13/2010	SB03(2-4) RD89F 7/13/2010	SB03(4-6) RE13E 7/14/2010
Ethylbenzene						0.0019 U					
Styrene						0.0019 U					
Trichlorofluoromethane						0.0019 U					
1,1,2-Trichloro-1,2,2-trifluoroethane						0.0038 U					
m, p-Xylene						0.0019 U					
o-Xylene						0.0019 U					
1,2-Dichlorobenzene						0.0019 U					
1,3-Dichlorobenzene						0.0019 U					
1,4-Dichlorobenzene						0.0019 U					
Acrolein						0.096 U					
Methyl Iodide						0.0019 UJ					
Bromoethane						0.0038 U					
Acrylonitrile						0.0096 U					
1,1-Dichloropropene						0.0019 U					
Dibromomethane						0.0019 U					
1,1,1,2-Tetrachloroethane						0.0019 U					
1,2-Dibromo-3-chloropropane						0.0096 U					
1,2,3-Trichloropropane						0.0038 U					
trans-1,4-Dichloro-2-butene						0.0096 U					
1,3,5-Trimethylbenzene						0.0019 U					
1,2,4-Trimethylbenzene						0.0019 U					
Hexachlorobutadiene						0.0096 U					
Ethylene Dibromide						0.0019 U					
Bromochloromethane						0.0019 U					
2,2-Dichloropropane						0.0019 U					
1,3-Dichloropropane						0.0019 U					
Isopropylbenzene						0.0019 U					
n-Propylbenzene						0.0019 U					
Bromobenzene						0.0019 U					
2-Chlorotoluene						0.0019 U					
4-Chlorotoluene						0.0019 U					
tert-Butylbenzene						0.0019 U					
sec-Butylbenzene						0.0019 U					
4-Isopropyltoluene						0.0019 U					
n-Butylbenzene						0.0019 U					
1,2,4-Trichlorobenzene						0.0096 U					
Naphthalene						0.0096 U					
1,2,3-Trichlorobenzene						0.0096 U					
CONVENTIONALS (%)											
Total Solids (EPA160.3)	88.10										
Total Organic Carbon (PLUMB81TC)	0.416										

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB03(6-8) RE13R 7/14/2010	SB04(0-2) RD89G 7/13/2010	SB04(2-4) RD89H 7/13/2010	SB04(4-6) RE13F 7/14/2010	SB04(6-8) RE13G 7/14/2010	SB05(0-2) RD89I 7/13/2010	SB05(2-4) RD89J 7/13/2010	SB05(4-6) RE13H 7/14/2010	SB05(6-8) RE13I 7/14/2010	SB06(0-2) RE67A 7/15/2010	SB06(2-4) RE67B 7/15/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.03 U	0.18 U	0.030 U	0.033 U	0.031 U	0.032 U	0.030 U	0.03 U	0.031 U	0.031 U	0.033 U
Aroclor 1242	0.03 U	0.18 U	0.030 U	0.033 U	0.031 U	0.032 U	0.030 U	0.03 U	0.031 U	0.031 U	0.033 U
Aroclor 1248	0.03 U	0.9 U	**0.22**	**0.061**	0.031 U	0.032 U	0.030 U	0.03 U	0.031 U	**0.044**	0.033 U
Aroclor 1254	0.03 U	**5.4**	**0.25**	**0.047**	0.031 U	0.032 U	0.030 U	0.03 U	0.031 U	**0.047**	0.033 U
Aroclor 1260	0.03 U	0.54 U	0.030 U	0.033 U	0.031 U	**0.065**	0.030 U	0.03 U	0.031 U	0.031 U	0.033 U
Aroclor 1221	0.03 U	0.18 U	0.030 U	0.033 U	0.031 U	0.032 U	0.030 U	0.03 U	0.031 U	0.031 U	0.033 U
Aroclor 1232	0.03 U	0.18 U	0.030 U	0.033 U	0.031 U	0.032 U	0.030 U	0.03 U	0.031 U	0.031 U	0.033 U
Total PCBs	0.03 U	**5.4**	**0.47**	**0.108**	0.031 U	**0.065**	0.030 U	0.03 U	0.031 U	**0.091**	0.033 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic			6 U				6 U				6 U
Cadmium			0.3 U				0.2 U				0.2 U
Chromium			**12.6**				**11.0**				**15.4**
Copper			**9.2**				**12.3**				**8.6**
Lead			3 U				**3**				2 U
Mercury			0.03 U				**0.03**				**0.03**
Zinc			**23**				**30**				**27**
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB03(6-8) RE13R 7/14/2010	SB04(0-2) RD89G 7/13/2010	SB04(2-4) RD89H 7/13/2010	SB04(4-6) RE13F 7/14/2010	SB04(6-8) RE13G 7/14/2010	SB05(0-2) RD89I 7/13/2010	SB05(2-4) RD89J 7/13/2010	SB05(4-6) RE13H 7/14/2010	SB05(6-8) RE13I 7/14/2010	SB06(0-2) RE67A 7/15/2010	SB06(2-4) RE67B 7/15/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB03(6-8) RE13R 7/14/2010	SB04(0-2) RD89G 7/13/2010	SB04(2-4) RD89H 7/13/2010	SB04(4-6) RE13F 7/14/2010	SB04(6-8) RE13G 7/14/2010	SB05(0-2) RD89I 7/13/2010	SB05(2-4) RD89J 7/13/2010	SB05(4-6) RE13H 7/14/2010	SB05(6-8) RE13I 7/14/2010	SB06(0-2) RE67A 7/15/2010	SB06(2-4) RE67B 7/15/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics		6.8 U									
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane		0.0012 UJ									
Bromomethane		0.0012 UJ									
Vinyl Chloride		0.0012 U									
Chloroethane		0.0012 U									
Methylene Chloride		**0.0073**									
Acetone		**0.042**									
Carbon Disulfide		0.0012 U									
1,1-Dichloroethene		0.0012 U									
1,1-Dichloroethane		0.0012 U									
trans-1,2-Dichloroethene		0.0012 U									
cis-1,2-Dichloroethene		0.0012 U									
Chloroform		0.0012 U									
1,2-Dichloroethane		0.0012 U									
2-Butanone		0.0058 U									
1,1,1-Trichloroethane		0.0012 U									
Carbon Tetrachloride		0.0012 U									
Vinyl Acetate		0.0058 U									
Bromodichloromethane		0.0012 U									
1,2-Dichloropropane		0.0012 U									
cis-1,3-Dichloropropene		0.0012 U									
Trichloroethene		**0.0019**									
Dibromochloromethane		0.0012 U									
1,1,2-Trichloroethane		0.0012 U									
Benzene		0.0012 U									
trans-1,3-Dichloropropene		0.0012 U									
2-Chloroethylvinylether		0.0058 U									
Bromoform		0.0012 U									
4-Methyl-2-Pentanone (MIBK)		0.0058 U									
2-Hexanone		0.0058 U									
Tetrachloroethene		0.0012 U									
1,1,2,2-Tetrachloroethane		0.0012 U									
Toluene		0.0012 U									
Chlorobenzene		0.0012 U									

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB03(6-8) RE13R 7/14/2010	SB04(0-2) RD89G 7/13/2010	SB04(2-4) RD89H 7/13/2010	SB04(4-6) RE13F 7/14/2010	SB04(6-8) RE13G 7/14/2010	SB05(0-2) RD89I 7/13/2010	SB05(2-4) RD89J 7/13/2010	SB05(4-6) RE13H 7/14/2010	SB05(6-8) RE13I 7/14/2010	SB06(0-2) RE67A 7/15/2010	SB06(2-4) RE67B 7/15/2010
Ethylbenzene		0.0012 U									
Styrene		0.0012 U									
Trichlorofluoromethane		0.0012 U									
1,1,2-Trichloro-1,2,2-trifluoroethane		0.0023 U									
m, p-Xylene		0.0012 U									
o-Xylene		0.0012 U									
1,2-Dichlorobenzene		0.0012 U									
1,3-Dichlorobenzene		0.0012 U									
1,4-Dichlorobenzene		0.0012 U									
Acrolein		0.058 U									
Methyl Iodide		0.0012 UJ									
Bromoethane		0.0023 U									
Acrylonitrile		0.0058 U									
1,1-Dichloropropene		0.0012 U									
Dibromomethane		0.0012 U									
1,1,1,2-Tetrachloroethane		0.0012 U									
1,2-Dibromo-3-chloropropane		0.0058 U									
1,2,3-Trichloropropane		0.0023 U									
trans-1,4-Dichloro-2-butene		0.0058 U									
1,3,5-Trimethylbenzene		0.0012 U									
1,2,4-Trimethylbenzene		0.0012 U									
Hexachlorobutadiene		0.0058 U									
Ethylene Dibromide		0.0012 U									
Bromochloromethane		0.0012 U									
2,2-Dichloropropane		0.0012 U									
1,3-Dichloropropane		0.0012 U									
Isopropylbenzene		0.0012 U									
n-Propylbenzene		0.0012 U									
Bromobenzene		0.0012 U									
2-Chlorotoluene		0.0012 U									
4-Chlorotoluene		0.0012 U									
tert-Butylbenzene		0.0012 U									
sec-Butylbenzene		0.0012 U									
4-Isopropyltoluene		0.0012 U									
n-Butylbenzene		0.0012 U									
1,2,4-Trichlorobenzene		0.0058 U									
Naphthalene		0.0058 U									
1,2,3-Trichlorobenzene		0.0058 U									
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB06(4-6) RE70O 7/16/2010	SBDUP06(4-6) RE70P 7/16/2010	SB06(6-8) RE70Q 7/16/2010	SB07(0-2) RD89K 7/13/2010	SB07(2-4) RD89L 7/13/2010	SB07(4-6) RE13J 7/14/2010	SB07(6-8) RE13K 7/14/2010	SB08(0-2) RE66P 7/15/2010	SB09(0-2) RE13L 7/14/2010	SB09(2-4) RE13M 7/14/2010	SB09(4-6) RE13N 7/14/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.032 U	0.032 U	0.032 U	0.044 U	18 U	470 U	0.032 U	0.075 U	0.03 U	0.032 U	0.032 U
Aroclor 1242	0.032 U	0.032 U	0.032 U	0.044 U	18 U	470 U	0.032 U	0.075 U	0.03 U	0.032 U	0.032 U
Aroclor 1248	0.032 U	0.032 U	0.032 U	**1.4**	**640**	**2300**	**0.16**	**2.8**	**0.034**	0.032 U	**0.27**
Aroclor 1254	0.032 U	0.032 U	0.032 U	**1.8**	260 U	710 U	**0.10**	**3.5**	0.03 U	0.032 U	**0.14**
Aroclor 1260	0.032 U	0.032 U	0.032 U	0.18 U	18 U	470 U	0.032 U	**2.6**	**0.038**	0.032 U	0.032 U
Aroclor 1221	0.032 U	0.032 U	0.032 U	0.044 U	18 U	470 U	0.032 U	0.075 U	0.03 U	0.032 U	0.032 U
Aroclor 1232	0.032 U	0.032 U	0.032 U	0.044 U	18 U	470 U	0.032 U	0.075 U	0.03 U	0.032 U	0.032 U
Total PCBs	0.032 U	0.032 U	0.032 U	**3.2**	**640**	**2300**	**0.26**	**8.9**	**0.072**	0.032 U	**0.41**
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic					5 U					**6**	
Cadmium					**2.5**					**0.3**	
Chromium					**24.6**					**33.7**	
Copper					**27.8**					**26.2**	
Lead					**51**					**7**	
Mercury					**4**					**0.07**	
Zinc					**64**					**41**	
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol									0.06 U		
Bis-(2-Chloroethyl) Ether									0.06 U		
2-Chlorophenol									0.06 U		
1,3-Dichlorobenzene									0.06 U		
1,4-Dichlorobenzene									0.06 U		
Benzyl Alcohol									0.3 U		
1,2-Dichlorobenzene									0.06 U		
2-Methylphenol									0.06 U		
2,2'-Oxybis(1-Chloropropane)									0.06 U		
4-Methylphenol									0.06 U		
N-Nitroso-Di-N-Propylamine									0.3 U		
Hexachloroethane									0.06 U		
Nitrobenzene									0.06 U		
Isophorone									0.06 U		
2-Nitrophenol									0.06 U		
2,4-Dimethylphenol									0.06 U		
Benzoic Acid									0.6 U		
bis(2-Chloroethoxy) Methane									0.06 U		
2,4-Dichlorophenol									0.3 U		
1,2,4-Trichlorobenzene									0.06 U		
Naphthalene									**0.092**		
4-Chloroaniline									0.3 U		

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB06(4-6) RE70O 7/16/2010	SBDUP06(4-6) RE70P 7/16/2010	SB06(6-8) RE70Q 7/16/2010	SB07(0-2) RD89K 7/13/2010	SB07(2-4) RD89L 7/13/2010	SB07(4-6) RE13J 7/14/2010	SB07(6-8) RE13K 7/14/2010	SB08(0-2) RE66P 7/15/2010	SB09(0-2) RE13L 7/14/2010	SB09(2-4) RE13M 7/14/2010	SB09(4-6) RE13N 7/14/2010
Hexachlorobutadiene									0.06 U		
4-Chloro-3-methylphenol									0.3 U		
2-Methylnaphthalene									**0.2**		
Hexachlorocyclopentadiene									0.3 U		
2,4,6-Trichlorophenol									0.3 U		
2,4,5-Trichlorophenol									0.3 U		
2-Chloronaphthalene									0.06 U		
2-Nitroaniline									0.3 U		
Dimethylphthalate									0.06 U		
Acenaphthylene									0.06 U		
3-Nitroaniline									0.3 U		
Acenaphthene									0.06 U		
2,4-Dinitrophenol									0.6 U		
4-Nitrophenol									0.3 U		
Dibenzofuran									**0.089**		
2,6-Dinitrotoluene									0.3 U		
2,4-Dinitrotoluene									0.3 U		
Diethylphthalate									0.06 U		
4-Chlorophenyl-phenylether									0.06 U		
Fluorene									0.06 U		
4-Nitroaniline									0.3 U		
4,6-Dinitro-2-Methylphenol									0.6 U		
N-Nitrosodiphenylamine									0.06 U		
4-Bromophenyl-phenylether									0.06 U		
Hexachlorobenzene									0.06 U		
Pentachlorophenol									0.3 U		
Phenanthrene									**0.32**		
Carbazole									0.06 U		
Anthracene									0.06 U		
Di-n-Butylphthalate									0.06 U		
Fluoranthene									**0.12**		
Pyrene									**0.14**		
Butylbenzylphthalate									0.06 U		
3,3'-Dichlorobenzidine									0.3 U		
Benzo(a)anthracene									0.06 U		
bis(2-Ethylhexyl)phthalate									0.06 U		
Chrysene									**0.11**		
Di-n-Octyl phthalate									0.06 U		
Benzo(b)fluoranthene									0.06 U		
Benzo(k)fluoranthene									0.06 U		
Benzo(a)pyrene									0.06 U		
Indeno(1,2,3-cd)pyrene									0.06 U		
Dibenz(a,h)anthracene									0.06 U		
Benzo(g,h,i)perylene									0.06 U		
1-Methylnaphthalene									**0.14**		

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB06(4-6) RE70O 7/16/2010	SBDUP06(4-6) RE70P 7/16/2010	SB06(6-8) RE70Q 7/16/2010	SB07(0-2) RD89K 7/13/2010	SB07(2-4) RD89L 7/13/2010	SB07(4-6) RE13J 7/14/2010	SB07(6-8) RE13K 7/14/2010	SB08(0-2) RE66P 7/15/2010	SB09(0-2) RE13L 7/14/2010	SB09(2-4) RE13M 7/14/2010	SB09(4-6) RE13N 7/14/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics									**150**		
Lube Oil									**430**		
NWTPH-Gx											
Gasoline Range Organics				6.2 U					**19**		
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane				0.0011 UJ							
Bromomethane				0.0011 UJ							
Vinyl Chloride				0.0011 U							
Chloroethane				0.0011 U							
Methylene Chloride				**0.004**							
Acetone				**0.095**							
Carbon Disulfide				**0.0038**							
1,1-Dichloroethene				0.0011 U							
1,1-Dichloroethane				0.0011 U							
trans-1,2-Dichloroethene				0.0011 U							
cis-1,2-Dichloroethene				0.0011 U							
Chloroform				0.0011 U							
1,2-Dichloroethane				0.0011 U							
2-Butanone				**0.007**							
1,1,1-Trichloroethane				0.0011 U							
Carbon Tetrachloride				0.0011 U							
Vinyl Acetate				0.0057 U							
Bromodichloromethane				0.0011 U							
1,2-Dichloropropane				0.0011 U							
cis-1,3-Dichloropropene				0.0011 U							
Trichloroethene				0.0011 U							
Dibromochloromethane				0.0011 U							
1,1,2-Trichloroethane				0.0011 U							
Benzene				**0.0049**							
trans-1,3-Dichloropropene				0.0011 U							
2-Chloroethylvinylether				0.0057 U							
Bromoform				0.0011 U							
4-Methyl-2-Pentanone (MIBK)				0.0057 U							
2-Hexanone				0.0057 U							
Tetrachloroethene				0.0011 U							
1,1,2,2-Tetrachloroethane				0.0011 U							
Toluene				**0.0021**							
Chlorobenzene				0.0011 U							

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB06(4-6) RE70O 7/16/2010	SBDUP06(4-6) RE70P 7/16/2010	SB06(6-8) RE70Q 7/16/2010	SB07(0-2) RD89K 7/13/2010	SB07(2-4) RD89L 7/13/2010	SB07(4-6) RE13J 7/14/2010	SB07(6-8) RE13K 7/14/2010	SB08(0-2) RE66P 7/15/2010	SB09(0-2) RE13L 7/14/2010	SB09(2-4) RE13M 7/14/2010	SB09(4-6) RE13N 7/14/2010
Ethylbenzene				0.0011 U							
Styrene				0.0011 U							
Trichlorofluoromethane				0.0011 U							
1,1,2-Trichloro-1,2,2-trifluoroethane				0.0023 U							
m, p-Xylene				0.0011 U							
o-Xylene				0.0011 U							
1,2-Dichlorobenzene				0.0011 U							
1,3-Dichlorobenzene				0.0011 U							
1,4-Dichlorobenzene				0.0011 U							
Acrolein				0.057 U							
Methyl Iodide				0.0011 UJ							
Bromoethane				0.0023 U							
Acrylonitrile				0.0057 U							
1,1-Dichloropropene				0.0011 U							
Dibromomethane				0.0011 U							
1,1,1,2-Tetrachloroethane				0.0011 U							
1,2-Dibromo-3-chloropropane				0.0057 U							
1,2,3-Trichloropropane				0.0023 U							
trans-1,4-Dichloro-2-butene				0.0057 U							
1,3,5-Trimethylbenzene				0.0011 U							
1,2,4-Trimethylbenzene				0.0011 U							
Hexachlorobutadiene				0.0057 U							
Ethylene Dibromide				0.0011 U							
Bromochloromethane				0.0011 U							
2,2-Dichloropropane				0.0011 U							
1,3-Dichloropropane				0.0011 U							
Isopropylbenzene				0.0011 U							
n-Propylbenzene				0.0011 U							
Bromobenzene				0.0011 U							
2-Chlorotoluene				0.0011 U							
4-Chlorotoluene				0.0011 U							
tert-Butylbenzene				0.0011 U							
sec-Butylbenzene				0.0011 U							
4-Isopropyltoluene				0.0011 U							
n-Butylbenzene				0.0011 U							
1,2,4-Trichlorobenzene				0.0057 U							
Naphthalene				0.0057 U							
1,2,3-Trichlorobenzene				0.0057 U							
CONVENTIONALS (%)											
Total Solids (EPA160.3)									87.70		
Total Organic Carbon (PLUMB81TC)									6.21		

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB09(6-8) RE13O 7/14/2010	SB10(0-2) RE13P 7/14/2010	SB10(2-4) RE13Q 7/14/2010	SB10(4-6) RE14A 7/14/2010	SB10-(6-8) RE14B 7/14/2010	SB11(0-2) RE14C 7/14/2010	SB11(2-4) RE14D 7/14/2010	SBDUP11(2-4) RE15D 7/14/2010	SB11(4-6) RE14E 7/14/2010	SB11-(6-8) RE14F 7/14/2010	SB12(0-2) RE14G 7/14/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.03 U	0.032 U	0.031 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.031 U
Aroclor 1242	0.03 U	0.032 U	0.031 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.031 U
Aroclor 1248	**0.09**	0.032 U	0.031 U	0.031 U	0.032 U	0.08 U	0.032 U	0.032 U	0.032 U	0.032 U	0.078 U
Aroclor 1254	**0.048**	0.032 U	0.031 U	0.031 U	0.032 U	**0.23**	0.032 U	0.032 U	0.032 U	0.032 U	**0.19**
Aroclor 1260	0.03 U	0.032 U	0.031 U	0.031 U	0.032 U	**0.088**	0.032 U	0.032 U	0.032 U	0.032 U	**0.07**
Aroclor 1221	0.03 U	0.032 U	0.031 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.031 U
Aroclor 1232	0.03 U	0.032 U	0.031 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.032 U	0.031 U
Total PCBs	**0.138**	0.032 U	0.031 U	0.031 U	0.032 U	**0.318**	0.032 U	0.032 U	0.032 U	0.032 U	**0.26**
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic											
Cadmium											
Chromium											
Copper											
Lead											
Mercury											
Zinc											
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB09(6-8) RE13O 7/14/2010	SB10(0-2) RE13P 7/14/2010	SB10(2-4) RE13Q 7/14/2010	SB10(4-6) RE14A 7/14/2010	SB10-(6-8) RE14B 7/14/2010	SB11(0-2) RE14C 7/14/2010	SB11(2-4) RE14D 7/14/2010	SBDUP11(2-4) RE15D 7/14/2010	SB11(4-6) RE14E 7/14/2010	SB11-(6-8) RE14F 7/14/2010	SB12(0-2) RE14G 7/14/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB09(6-8) RE13O 7/14/2010	SB10(0-2) RE13P 7/14/2010	SB10(2-4) RE13Q 7/14/2010	SB10(4-6) RE14A 7/14/2010	SB10-(6-8) RE14B 7/14/2010	SB11(0-2) RE14C 7/14/2010	SB11(2-4) RE14D 7/14/2010	SBDUP11(2-4) RE15D 7/14/2010	SB11(4-6) RE14E 7/14/2010	SB11-(6-8) RE14F 7/14/2010	SB12(0-2) RE14G 7/14/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics											
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB09(6-8) RE13O 7/14/2010	SB10(0-2) RE13P 7/14/2010	SB10(2-4) RE13Q 7/14/2010	SB10(4-6) RE14A 7/14/2010	SB10-(6-8) RE14B 7/14/2010	SB11(0-2) RE14C 7/14/2010	SB11(2-4) RE14D 7/14/2010	SBDUP11(2-4) RE15D 7/14/2010	SB11(4-6) RE14E 7/14/2010	SB11-(6-8) RE14F 7/14/2010	SB12(0-2) RE14G 7/14/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB12(2-4) RE14H 7/14/2010	SB12(4-6) RE14I 7/14/2010	SB12-(6-8) RE14J 7/14/2010	SB13-(0-2) RE14K 7/14/2010	SB13(2-4) RE14L 7/14/2010	SB13(4-6) RE14M 7/14/2010	SB13(6-8) RE14N 7/14/2010	SB14(0-2) RE14O 7/14/2010	SB14(2-4) RE14P 7/14/2010	SB14(4-6) RE70K 7/16/2010	SB14(6-8) RE70L 7/16/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.032 U	0.032 U	**0.054**	0.03 U	0.031 U	0.031 U	0.032 U	0.031 U	0.031 U	0.033 U	0.032 U
Aroclor 1242	0.032 U	0.032 U	0.032 U	0.03 U	0.031 U	0.031 U	0.032 U	0.031 U	0.031 U	0.033 U	0.032 U
Aroclor 1248	**0.095**	0.032 U	0.032 U	0.03 U	0.031 U	0.031 U	0.032 U	**0.24**	0.031 U	0.033 U	0.032 U
Aroclor 1254	**0.12**	0.032 U	0.032 U	0.03 U	0.031 U	0.031 U	0.032 U	**0.12**	0.031 U	0.033 U	0.032 U
Aroclor 1260	0.032 U	0.032 U	0.032 U	0.03 U	0.031 U	0.031 U	0.032 U	0.031 U	0.031 U	0.033 U	0.032 U
Aroclor 1221	0.032 U	0.032 U	0.032 U	0.03 U	0.031 U	0.031 U	0.032 U	0.031 U	0.031 U	0.033 U	0.032 U
Aroclor 1232	0.032 U	0.032 U	0.032 U	0.03 U	0.031 U	0.031 U	0.032 U	0.031 U	0.031 U	0.033 U	0.032 U
Total PCBs	**0.215**	0.032 U	**0.054**	0.03 U	0.031 U	0.031 U	0.032 U	**0.36**	0.031 U	0.033 U	0.032 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic	6 U				6 U						
Cadmium	**1.0**				0.2 U						
Chromium	**18.7**				**11.9**						
Copper	**36.6**				**9.6**						
Lead	**15**				**3**						
Mercury	**0.09**				**0.23**						
Zinc	**156**				**30**						
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB12(2-4) RE14H 7/14/2010	SB12(4-6) RE14I 7/14/2010	SB12-(6-8) RE14J 7/14/2010	SB13-(0-2) RE14K 7/14/2010	SB13(2-4) RE14L 7/14/2010	SB13(4-6) RE14M 7/14/2010	SB13(6-8) RE14N 7/14/2010	SB14(0-2) RE14O 7/14/2010	SB14(2-4) RE14P 7/14/2010	SB14(4-6) RE70K 7/16/2010	SB14(6-8) RE70L 7/16/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB12(2-4) RE14H 7/14/2010	SB12(4-6) RE14I 7/14/2010	SB12-(6-8) RE14J 7/14/2010	SB13-(0-2) RE14K 7/14/2010	SB13(2-4) RE14L 7/14/2010	SB13(4-6) RE14M 7/14/2010	SB13(6-8) RE14N 7/14/2010	SB14(0-2) RE14O 7/14/2010	SB14(2-4) RE14P 7/14/2010	SB14(4-6) RE70K 7/16/2010	SB14(6-8) RE70L 7/16/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics											
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB12(2-4) RE14H 7/14/2010	SB12(4-6) RE14I 7/14/2010	SB12-(6-8) RE14J 7/14/2010	SB13-(0-2) RE14K 7/14/2010	SB13(2-4) RE14L 7/14/2010	SB13(4-6) RE14M 7/14/2010	SB13(6-8) RE14N 7/14/2010	SB14(0-2) RE14O 7/14/2010	SB14(2-4) RE14P 7/14/2010	SB14(4-6) RE70K 7/16/2010	SB14(6-8) RE70L 7/16/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB15(0-2) RE14Q 7/14/2010	SB15(2-4) RE15A 7/14/2010	SB15(4-6) RE70G 7/16/2010	SB15(6-8) RE70H 7/16/2010	SB16(0-2) RE15B 7/14/2010	SB16(2-4) RE15C 7/14/2010	SB16(4-6) RE70C 7/16/2010	SB16(6-8) RE70D 7/16/2010	SB17(0-2) RE66A 7/15/2010	SB17(2-4) RE66B 7/15/2010	SB17(4-6) RE70A 7/16/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.033 U	0.033 U	0.032 U	0.033 U	0.03 U	0.032 U	0.033 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1242	0.033 U	0.033 U	0.032 U	0.033 U	0.03 U	0.032 U	0.033 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1248	0.033 U	0.033 U	0.032 U	0.033 U	0.03 U	0.032 U	0.033 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1254	0.033 U	0.033 U	0.032 U	0.033 U	0.03 U	0.032 U	0.033 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1260	0.033 U	0.033 U	0.032 U	0.033 U	**0.034**	**0.039**	0.033 U	0.032 U	**0.046**	0.032 U	0.032 U
Aroclor 1221	0.033 U	0.033 U	0.032 U	0.033 U	0.03 U	0.032 U	0.033 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1232	0.033 U	0.033 U	0.032 U	0.033 U	0.03 U	0.032 U	0.033 U	0.032 U	0.033 U	0.032 U	0.032 U
Total PCBs	0.033 U	0.033 U	0.032 U	0.033 U	**0.034**	**0.039**	0.033 U	0.032 U	**0.046**	0.032 U	0.032 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic											
Cadmium											
Chromium											
Copper											
Lead											
Mercury											
Zinc											
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB15(0-2) RE14Q 7/14/2010	SB15(2-4) RE15A 7/14/2010	SB15(4-6) RE70G 7/16/2010	SB15(6-8) RE70H 7/16/2010	SB16(0-2) RE15B 7/14/2010	SB16(2-4) RE15C 7/14/2010	SB16(4-6) RE70C 7/16/2010	SB16(6-8) RE70D 7/16/2010	SB17(0-2) RE66A 7/15/2010	SB17(2-4) RE66B 7/15/2010	SB17(4-6) RE70A 7/16/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB15(0-2) RE14Q 7/14/2010	SB15(2-4) RE15A 7/14/2010	SB15(4-6) RE70G 7/16/2010	SB15(6-8) RE70H 7/16/2010	SB16(0-2) RE15B 7/14/2010	SB16(2-4) RE15C 7/14/2010	SB16(4-6) RE70C 7/16/2010	SB16(6-8) RE70D 7/16/2010	SB17(0-2) RE66A 7/15/2010	SB17(2-4) RE66B 7/15/2010	SB17(4-6) RE70A 7/16/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics											
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB15(0-2) RE14Q 7/14/2010	SB15(2-4) RE15A 7/14/2010	SB15(4-6) RE70G 7/16/2010	SB15(6-8) RE70H 7/16/2010	SB16(0-2) RE15B 7/14/2010	SB16(2-4) RE15C 7/14/2010	SB16(4-6) RE70C 7/16/2010	SB16(6-8) RE70D 7/16/2010	SB17(0-2) RE66A 7/15/2010	SB17(2-4) RE66B 7/15/2010	SB17(4-6) RE70A 7/16/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB17(6-8) RE70B 7/16/2010	SB18(0-2) RE66C 7/15/2010	SB18(2-4) RE66D 7/15/2010	SB18(4-6) RE66E 7/15/2010	SB19(0-2) RE66F 7/15/2010	SB19(2-4) RE66G 7/15/2010	SBDUP19(2-4) RE68E 7/15/2010	SB19(4-6) RE70I 7/16/2010	SB19(6-8) RE70J 7/16/2010	SB20(0-2) RE66H 7/15/2010
PCBs (mg/kg)										
Method SW8082										
Aroclor 1016	0.032 U	0.032 U	0.032 U	0.031 U	0.031 U	0.030 U	0.031 U	0.032 U	0.033 U	0.032 U
Aroclor 1242	0.032 U	0.032 U	0.032 U	0.031 U	0.031 U	0.030 U	0.031 U	0.032 U	0.033 U	0.032 U
Aroclor 1248	0.032 U	0.032 U	0.032 U	0.031 U	0.031 U	0.030 U	0.031 U	0.032 U	0.033 U	0.032 U
Aroclor 1254	0.032 U	0.032 U	0.032 U	0.031 U	0.031 U	0.030 U	0.031 U	0.032 U	0.033 U	0.032 U
Aroclor 1260	0.032 U	0.032 U	0.032 U	0.031 U	0.031 U	0.030 U	0.031 U	0.032 U	0.033 U	0.032 U
Aroclor 1221	0.032 U	0.032 U	0.032 U	0.031 U	0.031 U	0.030 U	0.031 U	0.032 U	0.033 U	0.032 U
Aroclor 1232	0.032 U	0.032 U	0.032 U	0.031 U	0.031 U	0.030 U	0.031 U	0.032 U	0.033 U	0.032 U
Total PCBs	0.032 U	0.032 U	0.032 U	0.031 U	0.031 U	0.030 U	0.031 U	0.032 U	0.033 U	0.032 U
TOTAL METALS (mg/kg)										
Methods SW6010B/SW7471A										
Arsenic			6 U			6 U	6 U			
Cadmium			0.2 U			0.2 U	0.2 U			
Chromium			**12.1**			**12.4**	**11.9**			
Copper			**8.9**			**9.7**	**8.5**			
Lead			2 U			2 U	2 U			
Mercury			0.02 U			0.02 U	0.03 U			
Zinc			**28**			**22**	**22**			
SEMIVOLATILES (mg/kg)										
Method 8270D										
Phenol										
Bis-(2-Chloroethyl) Ether										
2-Chlorophenol										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
Benzyl Alcohol										
1,2-Dichlorobenzene										
2-Methylphenol										
2,2'-Oxybis(1-Chloropropane)										
4-Methylphenol										
N-Nitroso-Di-N-Propylamine										
Hexachloroethane										
Nitrobenzene										
Isophorone										
2-Nitrophenol										
2,4-Dimethylphenol										
Benzoic Acid										
bis(2-Chloroethoxy) Methane										
2,4-Dichlorophenol										
1,2,4-Trichlorobenzene										
Naphthalene										
4-Chloroaniline										

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB17(6-8) RE70B 7/16/2010	SB18(0-2) RE66C 7/15/2010	SB18(2-4) RE66D 7/15/2010	SB18(4-6) RE66E 7/15/2010	SB19(0-2) RE66F 7/15/2010	SB19(2-4) RE66G 7/15/2010	SBDUP19(2-4) RE68E 7/15/2010	SB19(4-6) RE70I 7/16/2010	SB19(6-8) RE70J 7/16/2010	SB20(0-2) RE66H 7/15/2010
Hexachlorobutadiene										
4-Chloro-3-methylphenol										
2-Methylnaphthalene										
Hexachlorocyclopentadiene										
2,4,6-Trichlorophenol										
2,4,5-Trichlorophenol										
2-Chloronaphthalene										
2-Nitroaniline										
Dimethylphthalate										
Acenaphthylene										
3-Nitroaniline										
Acenaphthene										
2,4-Dinitrophenol										
4-Nitrophenol										
Dibenzofuran										
2,6-Dinitrotoluene										
2,4-Dinitrotoluene										
Diethylphthalate										
4-Chlorophenyl-phenylether										
Fluorene										
4-Nitroaniline										
4,6-Dinitro-2-Methylphenol										
N-Nitrosodiphenylamine										
4-Bromophenyl-phenylether										
Hexachlorobenzene										
Pentachlorophenol										
Phenanthrene										
Carbazole										
Anthracene										
Di-n-Butylphthalate										
Fluoranthene										
Pyrene										
Butylbenzylphthalate										
3,3'-Dichlorobenzidine										
Benzo(a)anthracene										
bis(2-Ethylhexyl)phthalate										
Chrysene										
Di-n-Octyl phthalate										
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Benzo(a)pyrene										
Indeno(1,2,3-cd)pyrene										
Dibenz(a,h)anthracene										
Benzo(g,h,i)perylene										
1-Methylnaphthalene										

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB17(6-8) RE70B 7/16/2010	SB18(0-2) RE66C 7/15/2010	SB18(2-4) RE66D 7/15/2010	SB18(4-6) RE66E 7/15/2010	SB19(0-2) RE66F 7/15/2010	SB19(2-4) RE66G 7/15/2010	SBDUP19(2-4) RE68E 7/15/2010	SB19(4-6) RE70I 7/16/2010	SB19(6-8) RE70J 7/16/2010	SB20(0-2) RE66H 7/15/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)										
NWTPH-Dx										
Diesel Range Organics										
Lube Oil										
NWTPH-Gx										
Gasoline Range Organics										
VOLATILES (mg/kg)										
Method 8260C										
Chloromethane										
Bromomethane										
Vinyl Chloride										
Chloroethane										
Methylene Chloride										
Acetone										
Carbon Disulfide										
1,1-Dichloroethene										
1,1-Dichloroethane										
trans-1,2-Dichloroethene										
cis-1,2-Dichloroethene										
Chloroform										
1,2-Dichloroethane										
2-Butanone										
1,1,1-Trichloroethane										
Carbon Tetrachloride										
Vinyl Acetate										
Bromodichloromethane										
1,2-Dichloropropane										
cis-1,3-Dichloropropene										
Trichloroethene										
Dibromochloromethane										
1,1,2-Trichloroethane										
Benzene										
trans-1,3-Dichloropropene										
2-Chloroethylvinylether										
Bromoform										
4-Methyl-2-Pentanone (MIBK)										
2-Hexanone										
Tetrachloroethene										
1,1,2,2-Tetrachloroethane										
Toluene										
Chlorobenzene										

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB17(6-8) RE70B 7/16/2010	SB18(0-2) RE66C 7/15/2010	SB18(2-4) RE66D 7/15/2010	SB18(4-6) RE66E 7/15/2010	SB19(0-2) RE66F 7/15/2010	SB19(2-4) RE66G 7/15/2010	SBDUP19(2-4) RE68E 7/15/2010	SB19(4-6) RE70I 7/16/2010	SB19(6-8) RE70J 7/16/2010	SB20(0-2) RE66H 7/15/2010
Ethylbenzene										
Styrene										
Trichlorofluoromethane										
1,1,2-Trichloro-1,2,2-trifluoroethane										
m, p-Xylene										
o-Xylene										
1,2-Dichlorobenzene										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
Acrolein										
Methyl Iodide										
Bromoethane										
Acrylonitrile										
1,1-Dichloropropene										
Dibromomethane										
1,1,1,2-Tetrachloroethane										
1,2-Dibromo-3-chloropropane										
1,2,3-Trichloropropane										
trans-1,4-Dichloro-2-butene										
1,3,5-Trimethylbenzene										
1,2,4-Trimethylbenzene										
Hexachlorobutadiene										
Ethylene Dibromide										
Bromochloromethane										
2,2-Dichloropropane										
1,3-Dichloropropane										
Isopropylbenzene										
n-Propylbenzene										
Bromobenzene										
2-Chlorotoluene										
4-Chlorotoluene										
tert-Butylbenzene										
sec-Butylbenzene										
4-Isopropyltoluene										
n-Butylbenzene										
1,2,4-Trichlorobenzene										
Naphthalene										
1,2,3-Trichlorobenzene										
CONVENTIONALS (%)										
Total Solids (EPA160.3)										
Total Organic Carbon (PLUMB81TC)										

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB20(2-4) RE66I 7/15/2010	SB20(4-6) RE70E 7/16/2010	SB20(6-8) RE70F 7/16/2010	SB21(0-2) RE66J 7/15/2010	SB21(2-4) RE66K 7/15/2010	SBDUP21(2-4) RE66L 7/15/2010	SB21(4-6) RE70M 7/16/2010	SB21(6-8) RE70N 7/16/2010	SB22(0-2) RE66M 7/15/2010	SB22(2-4) RE66N 7/15/2010	SB22(4-6) RE66O 7/15/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.033 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U	0.031 U	**0.22**	0.033 U
Aroclor 1242	0.033 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U	0.031 U	0.033 U	0.033 U
Aroclor 1248	0.033 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U	0.031 U	0.033 U	0.033 U
Aroclor 1254	0.033 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U	0.031 U	0.033 U	0.033 U
Aroclor 1260	0.033 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U	0.031 U	0.033 U	0.033 U
Aroclor 1221	0.033 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U	0.031 U	0.033 U	0.033 U
Aroclor 1232	0.033 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U	0.031 U	0.033 U	0.033 U
Total PCBs	0.033 U	0.032 U	0.033 U	0.032 U	0.033 U	0.033 U	0.032 U	0.033 U	0.031 U	**0.22**	0.033 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic	6 U										
Cadmium	0.2 U										
Chromium	**12.8**										
Copper	**11.8**										
Lead	**8**										
Mercury	**0.04**										
Zinc	**31**										
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB20(2-4) RE66I 7/15/2010	SB20(4-6) RE70E 7/16/2010	SB20(6-8) RE70F 7/16/2010	SB21(0-2) RE66J 7/15/2010	SB21(2-4) RE66K 7/15/2010	SBDUP21(2-4) RE66L 7/15/2010	SB21(4-6) RE70M 7/16/2010	SB21(6-8) RE70N 7/16/2010	SB22(0-2) RE66M 7/15/2010	SB22(2-4) RE66N 7/15/2010	SB22(4-6) RE66O 7/15/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB20(2-4) RE66I 7/15/2010	SB20(4-6) RE70E 7/16/2010	SB20(6-8) RE70F 7/16/2010	SB21(0-2) RE66J 7/15/2010	SB21(2-4) RE66K 7/15/2010	SBDUP21(2-4) RE66L 7/15/2010	SB21(4-6) RE70M 7/16/2010	SB21(6-8) RE70N 7/16/2010	SB22(0-2) RE66M 7/15/2010	SB22(2-4) RE66N 7/15/2010	SB22(4-6) RE66O 7/15/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics											
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB20(2-4) RE66I 7/15/2010	SB20(4-6) RE70E 7/16/2010	SB20(6-8) RE70F 7/16/2010	SB21(0-2) RE66J 7/15/2010	SB21(2-4) RE66K 7/15/2010	SBDUP21(2-4) RE66L 7/15/2010	SB21(4-6) RE70M 7/16/2010	SB21(6-8) RE70N 7/16/2010	SB22(0-2) RE66M 7/15/2010	SB22(2-4) RE66N 7/15/2010	SB22(4-6) RE66O 7/15/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB23(0-2) RE66Q 7/15/2010	SB23(2-4) RE66R 7/15/2010	SB23(4-6) RE70R 7/16/2010	SB23(6-8) RE71A 7/16/2010	SB24(0-2) RE67C 7/15/2010	SB24(2-4) RE67D 7/15/2010	SB24(4-6) RE71L 7/16/2010	SB24(6-8) RE71M 7/16/2010	SB25(0-2) RE67E 7/15/2010	SB25(2-4) RE67F 7/15/2010	SB25(4-6) RE71J 7/16/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1242	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1248	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1254	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1260	0.031 U	0.032 U	0.032 U	0.031 U	**0.035**	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1221	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U
Aroclor 1232	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U
Total PCBs	0.031 U	0.032 U	0.032 U	0.031 U	**0.035**	0.032 U	0.032 U	0.032 U	0.033 U	0.032 U	0.032 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic		6 U				**9**				6 U	
Cadmium		0.2 U				**0.4**				0.2 U	
Chromium		**13.2**				**16.7**				**13.0**	
Copper		**8.5**				**25.1**				**15.3**	
Lead		2 U				**11**				**7**	
Mercury		0.03 U				**0.12**				**0.03**	
Zinc		**24**				**53**				**35**	
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB23(0-2) RE66Q 7/15/2010	SB23(2-4) RE66R 7/15/2010	SB23(4-6) RE70R 7/16/2010	SB23(6-8) RE71A 7/16/2010	SB24(0-2) RE67C 7/15/2010	SB24(2-4) RE67D 7/15/2010	SB24(4-6) RE71L 7/16/2010	SB24(6-8) RE71M 7/16/2010	SB25(0-2) RE67E 7/15/2010	SB25(2-4) RE67F 7/15/2010	SB25(4-6) RE71J 7/16/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB23(0-2) RE66Q 7/15/2010	SB23(2-4) RE66R 7/15/2010	SB23(4-6) RE70R 7/16/2010	SB23(6-8) RE71A 7/16/2010	SB24(0-2) RE67C 7/15/2010	SB24(2-4) RE67D 7/15/2010	SB24(4-6) RE71L 7/16/2010	SB24(6-8) RE71M 7/16/2010	SB25(0-2) RE67E 7/15/2010	SB25(2-4) RE67F 7/15/2010	SB25(4-6) RE71J 7/16/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics	5.4 U								**11**		
Lube Oil	11 U								**89**		
NWTPH-Gx											
Gasoline Range Organics	6.2 U								6.2 U		
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB23(0-2) RE66Q 7/15/2010	SB23(2-4) RE66R 7/15/2010	SB23(4-6) RE70R 7/16/2010	SB23(6-8) RE71A 7/16/2010	SB24(0-2) RE67C 7/15/2010	SB24(2-4) RE67D 7/15/2010	SB24(4-6) RE71L 7/16/2010	SB24(6-8) RE71M 7/16/2010	SB25(0-2) RE67E 7/15/2010	SB25(2-4) RE67F 7/15/2010	SB25(4-6) RE71J 7/16/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)	89.90								94.10		
Total Organic Carbon (PLUMB81TC)	0.206								1.53		

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB25(6-8) RE71K 7/16/2010	SB26(0-2) RE67G 7/15/2010	SB26(2-4) RE67H 7/15/2010	SB26(4-6) RE71N 7/16/2010	SB26(6-8) RE71O 7/16/2010	SB27(0-2) RE67I 7/15/2010	SB27(2-4) RE67J 7/15/2010	SB27(4-6) RE72G 7/16/2010	SB27(6-8) RE72H 7/16/2010	SB28(0-2) RE67K 7/15/2010	SB28(2-4) RE67L 7/15/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U
Aroclor 1242	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U
Aroclor 1248	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U
Aroclor 1254	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U
Aroclor 1260	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U	0.032 U	0.033 U	0.033 U	0.032 U	**0.036**	0.032 U
Aroclor 1221	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U
Aroclor 1232	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U
Total PCBs	0.032 U	0.031 U	0.031 U	0.031 U	0.032 U	0.032 U	0.033 U	0.033 U	0.032 U	**0.036**	0.032 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic			5 U				6 U				6 U
Cadmium			0.2 U				0.2 U				0.2 U
Chromium			**10.3**				**11.6**				**12.3**
Copper			**9.4**				**8.0**				**9.4**
Lead			2 U				2 U				2 U
Mercury			0.03 U				0.03 U				**0.26**
Zinc			**25**				**32**				**26**
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB25(6-8) RE71K 7/16/2010	SB26(0-2) RE67G 7/15/2010	SB26(2-4) RE67H 7/15/2010	SB26(4-6) RE71N 7/16/2010	SB26(6-8) RE71O 7/16/2010	SB27(0-2) RE67I 7/15/2010	SB27(2-4) RE67J 7/15/2010	SB27(4-6) RE72G 7/16/2010	SB27(6-8) RE72H 7/16/2010	SB28(0-2) RE67K 7/15/2010	SB28(2-4) RE67L 7/15/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB25(6-8) RE71K 7/16/2010	SB26(0-2) RE67G 7/15/2010	SB26(2-4) RE67H 7/15/2010	SB26(4-6) RE71N 7/16/2010	SB26(6-8) RE71O 7/16/2010	SB27(0-2) RE67I 7/15/2010	SB27(2-4) RE67J 7/15/2010	SB27(4-6) RE72G 7/16/2010	SB27(6-8) RE72H 7/16/2010	SB28(0-2) RE67K 7/15/2010	SB28(2-4) RE67L 7/15/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics						**7.3**					
Lube Oil						**34**					
NWTPH-Gx											
Gasoline Range Organics						6.4 U					
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB25(6-8) RE71K 7/16/2010	SB26(0-2) RE67G 7/15/2010	SB26(2-4) RE67H 7/15/2010	SB26(4-6) RE71N 7/16/2010	SB26(6-8) RE71O 7/16/2010	SB27(0-2) RE67I 7/15/2010	SB27(2-4) RE67J 7/15/2010	SB27(4-6) RE72G 7/16/2010	SB27(6-8) RE72H 7/16/2010	SB28(0-2) RE67K 7/15/2010	SB28(2-4) RE67L 7/15/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)						90.20					
Total Organic Carbon (PLUMB81TC)						0.477					

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB28(4-6) RE71H 7/16/2010	SB28(6-8) RE71I 7/16/2010	SB29(0-2) RE67M 7/15/2010	SBDUP29(0-2) RE67O 7/15/2010	SB29(2-4) RE67N 7/15/2010	SB29(4-6) RE71F 7/16/2010	SB29(6-8) RE71G 7/16/2010	SB30(0-2) RE67P 7/15/2010	SB30(2-4) RE67Q 7/15/2010	SB31(0-2) RE67R 7/15/2010	SB31(2-4) RE68A 7/15/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.033 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.033 U	0.5 U	0.032 U	0.031 U	0.033 U
Aroclor 1242	0.033 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.033 U	0.5 U	0.032 U	0.031 U	0.033 U
Aroclor 1248	0.033 U	0.032 U	0.032 U	0.048 U	0.032 U	0.033 U	0.033 U	2.2 U	0.16 U	0.15 U	0.033 U
Aroclor 1254	0.033 U	0.032 U	**0.091**	**0.1**	0.032 U	0.033 U	0.033 U	**5.3**	**0.53**	**0.74**	0.033 U
Aroclor 1260	0.033 U	0.032 U	**0.055**	**0.057**	0.032 U	0.033 U	0.033 U	0.5 U	0.048 U	**0.11**	0.033 U
Aroclor 1221	0.033 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.033 U	0.5 U	0.032 U	0.031 U	0.033 U
Aroclor 1232	0.033 U	0.032 U	0.032 U	0.032 U	0.032 U	0.033 U	0.033 U	0.5 U	0.032 U	0.031 U	0.033 U
Total PCBs	0.033 U	0.032 U	**0.146**	**0.157**	0.032 U	0.033 U	0.033 U	**5.3**	**0.53**	**0.85**	0.033 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic					**6**				6 U		6 U
Cadmium					**0.5**				0.3 U		0.2 U
Chromium					**17.4**				**13.3**		**11.4**
Copper					**38.8**				**30.4**		**10.0**
Lead					**88**				**3**		**3**
Mercury					**0.38**				0.03 U		**0.06**
Zinc					**138**				**33**		**27**
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB28(4-6) RE71H 7/16/2010	SB28(6-8) RE71I 7/16/2010	SB29(0-2) RE67M 7/15/2010	SBDUP29(0-2) RE67O 7/15/2010	SB29(2-4) RE67N 7/15/2010	SB29(4-6) RE71F 7/16/2010	SB29(6-8) RE71G 7/16/2010	SB30(0-2) RE67P 7/15/2010	SB30(2-4) RE67Q 7/15/2010	SB31(0-2) RE67R 7/15/2010	SB31(2-4) RE68A 7/15/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB28(4-6) RE71H 7/16/2010	SB28(6-8) RE71I 7/16/2010	SB29(0-2) RE67M 7/15/2010	SBDUP29(0-2) RE67O 7/15/2010	SB29(2-4) RE67N 7/15/2010	SB29(4-6) RE71F 7/16/2010	SB29(6-8) RE71G 7/16/2010	SB30(0-2) RE67P 7/15/2010	SB30(2-4) RE67Q 7/15/2010	SB31(0-2) RE67R 7/15/2010	SB31(2-4) RE68A 7/15/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics											
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB28(4-6) RE71H 7/16/2010	SB28(6-8) RE71I 7/16/2010	SB29(0-2) RE67M 7/15/2010	SBDUP29(0-2) RE67O 7/15/2010	SB29(2-4) RE67N 7/15/2010	SB29(4-6) RE71F 7/16/2010	SB29(6-8) RE71G 7/16/2010	SB30(0-2) RE67P 7/15/2010	SB30(2-4) RE67Q 7/15/2010	SB31(0-2) RE67R 7/15/2010	SB31(2-4) RE68A 7/15/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB31(4-6) RE71B 7/16/2010	SB31(6-8) RE71C 7/16/2010	SB32(0-2) RE68B 7/15/2010	SB32(2-4) RE68C 7/15/2010	SB32(4-6) RE71D 7/16/2010	SB32(6-8) RE71E 7/16/2010	SB33(0-2) RE71P 7/16/2010	SB33(2-4) RE71Q 7/16/2010	SB33(4-6) RE71R 7/16/2010	SB33(6-8) RE72A 7/16/2010	SB34(0-2) RE72B 7/16/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.032 U	0.031 U
Aroclor 1242	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.032 U	0.031 U
Aroclor 1248	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.032 U	0.031 U
Aroclor 1254	**0.034**	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.032 U	0.031 U
Aroclor 1260	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.032 U	0.031 U
Aroclor 1221	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.032 U	0.031 U
Aroclor 1232	0.032 U	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.032 U	0.031 U
Total PCBs	**0.034**	0.033 U	0.033 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.032 U	0.031 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic				6 U							
Cadmium				0.2 U							
Chromium				**13.0**							
Copper				**7.6**							
Lead				2 U							
Mercury				0.03 U							
Zinc				**22**							
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol		0.062 U				0.059 U					
Bis-(2-Chloroethyl) Ether		0.062 U				0.059 U					
2-Chlorophenol		0.062 U				0.059 U					
1,3-Dichlorobenzene		0.062 U				0.059 U					
1,4-Dichlorobenzene		0.062 U				0.059 U					
Benzyl Alcohol		0.31 U				0.29 U					
1,2-Dichlorobenzene		0.062 U				0.059 U					
2-Methylphenol		0.062 U				0.059 U					
2,2'-Oxybis(1-Chloropropane)		0.062 U				0.059 U					
4-Methylphenol		0.062 U				0.059 U					
N-Nitroso-Di-N-Propylamine		0.31 U				0.29 U					
Hexachloroethane		0.062 U				0.059 U					
Nitrobenzene		0.062 U				0.059 U					
Isophorone		0.062 U				0.059 U					
2-Nitrophenol		0.062 U				0.059 U					
2,4-Dimethylphenol		0.062 U				0.059 U					
Benzoic Acid		0.62 U				0.59 U					
bis(2-Chloroethoxy) Methane		0.062 U				0.059 U					
2,4-Dichlorophenol		0.31 U				0.29 U					
1,2,4-Trichlorobenzene		0.062 U				0.059 U					
Naphthalene		0.062 U				0.059 U					
4-Chloroaniline		0.31 U				0.29 U					

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB31(4-6) RE71B 7/16/2010	SB31(6-8) RE71C 7/16/2010	SB32(0-2) RE68B 7/15/2010	SB32(2-4) RE68C 7/15/2010	SB32(4-6) RE71D 7/16/2010	SB32(6-8) RE71E 7/16/2010	SB33(0-2) RE71P 7/16/2010	SB33(2-4) RE71Q 7/16/2010	SB33(4-6) RE71R 7/16/2010	SB33(6-8) RE72A 7/16/2010	SB34(0-2) RE72B 7/16/2010
Hexachlorobutadiene		0.062 U				0.059 U					
4-Chloro-3-methylphenol		0.31 U				0.29 U					
2-Methylnaphthalene		0.062 U				0.059 U					
Hexachlorocyclopentadiene		0.31 U				0.29 U					
2,4,6-Trichlorophenol		0.31 U				0.29 U					
2,4,5-Trichlorophenol		0.31 U				0.29 U					
2-Chloronaphthalene		0.062 U				0.059 U					
2-Nitroaniline		0.31 U				0.29 U					
Dimethylphthalate		0.062 U				0.059 U					
Acenaphthylene		0.062 U				0.059 U					
3-Nitroaniline		0.31 U				0.29 U					
Acenaphthene		0.062 U				0.059 U					
2,4-Dinitrophenol		0.62 U				0.59 U					
4-Nitrophenol		0.31 U				0.29 U					
Dibenzofuran		0.062 U				0.059 U					
2,6-Dinitrotoluene		0.31 U				0.29 U					
2,4-Dinitrotoluene		0.31 U				0.29 U					
Diethylphthalate		0.062 U				0.059 U					
4-Chlorophenyl-phenylether		0.062 U				0.059 U					
Fluorene		0.062 U				0.059 U					
4-Nitroaniline		0.31 U				0.29 U					
4,6-Dinitro-2-Methylphenol		0.62 U				0.59 U					
N-Nitrosodiphenylamine		0.062 U				0.059 U					
4-Bromophenyl-phenylether		0.062 U				0.059 U					
Hexachlorobenzene		0.062 U				0.059 U					
Pentachlorophenol		0.31 U				0.29 U					
Phenanthrene		0.062 U				0.059 U					
Carbazole		0.062 U				0.059 U					
Anthracene		0.062 U				0.059 U					
Di-n-Butylphthalate		0.062 U				0.059 U					
Fluoranthene		0.062 U				0.059 U					
Pyrene		0.062 U				0.059 U					
Butylbenzylphthalate		0.062 U				0.059 U					
3,3'-Dichlorobenzidine		0.31 U				0.29 U					
Benzo(a)anthracene		0.062 U				0.059 U					
bis(2-Ethylhexyl)phthalate		0.062 U				0.059 U					
Chrysene		0.062 U				0.059 U					
Di-n-Octyl phthalate		0.062 U				0.059 U					
Benzo(b)fluoranthene		0.062 U				0.059 U					
Benzo(k)fluoranthene		0.062 U				0.059 U					
Benzo(a)pyrene		0.062 U				0.059 U					
Indeno(1,2,3-cd)pyrene		0.062 U				0.059 U					
Dibenz(a,h)anthracene		0.062 U				0.059 U					
Benzo(g,h,i)perylene		0.062 U				0.059 U					
1-Methylnaphthalene		0.062 U				0.059 U					

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB31(4-6) RE71B 7/16/2010	SB31(6-8) RE71C 7/16/2010	SB32(0-2) RE68B 7/15/2010	SB32(2-4) RE68C 7/15/2010	SB32(4-6) RE71D 7/16/2010	SB32(6-8) RE71E 7/16/2010	SB33(0-2) RE71P 7/16/2010	SB33(2-4) RE71Q 7/16/2010	SB33(4-6) RE71R 7/16/2010	SB33(6-8) RE72A 7/16/2010	SB34(0-2) RE72B 7/16/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics		6.1 U	5.4 U			6.2 U					
Lube Oil		12 U	11 U			12 U					
NWTPH-Gx											
Gasoline Range Organics			6.5 U								
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB31(4-6) RE71B 7/16/2010	SB31(6-8) RE71C 7/16/2010	SB32(0-2) RE68B 7/15/2010	SB32(2-4) RE68C 7/15/2010	SB32(4-6) RE71D 7/16/2010	SB32(6-8) RE71E 7/16/2010	SB33(0-2) RE71P 7/16/2010	SB33(2-4) RE71Q 7/16/2010	SB33(4-6) RE71R 7/16/2010	SB33(6-8) RE72A 7/16/2010	SB34(0-2) RE72B 7/16/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)			93.30								
Total Organic Carbon (PLUMB81TC)			0.185								

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB34(2-4) RE72C 7/16/2010	SB34(4-6) RE72D 7/16/2010	SB34(6-8) RE72E 7/16/2010	SBDUP34(6-8) RE72F 7/16/2010	SB35(0-2) RH01A 8/3/2010	SB35(2-4) RH01B 8/3/2010	SB35(4-6) RH01J 8/3/2010	SB35(6-8) RH01K 8/3/2010	SB36(0-2) RH01D 8/3/2010	SB36(2-4) RH01E 8/3/2010	SB36(4-6) RH01F 8/3/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.033 U	0.032 U	0.033 U	0.031 U	0.032 U	0.033 U	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U
Aroclor 1242	0.033 U	0.032 U	0.033 U	0.031 U	0.032 U	0.033 U	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U
Aroclor 1248	0.033 U	0.032 U	0.033 U	0.031 U	0.16 U	0.033 U	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U
Aroclor 1254	0.033 U	0.032 U	0.033 U	0.031 U	**1.1**	**0.07**	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U
Aroclor 1260	0.033 U	0.032 U	0.033 U	0.031 U	**0.3**	0.033 U	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U
Aroclor 1221	0.033 U	0.032 U	0.033 U	0.031 U	0.032 U	0.033 U	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U
Aroclor 1232	0.033 U	0.032 U	0.033 U	0.031 U	0.032 U	0.033 U	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U
Total PCBs	0.033 U	0.032 U	0.033 U	0.031 U	**1.4**	**0.07**	0.031 U	0.032 U	0.032 U	0.031 U	0.032 U
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic											
Cadmium											
Chromium											
Copper											
Lead											
Mercury											
Zinc											
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB34(2-4) RE72C 7/16/2010	SB34(4-6) RE72D 7/16/2010	SB34(6-8) RE72E 7/16/2010	SBDUP34(6-8) RE72F 7/16/2010	SB35(0-2) RH01A 8/3/2010	SB35(2-4) RH01B 8/3/2010	SB35(4-6) RH01J 8/3/2010	SB35(6-8) RH01K 8/3/2010	SB36(0-2) RH01D 8/3/2010	SB36(2-4) RH01E 8/3/2010	SB36(4-6) RH01F 8/3/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB34(2-4) RE72C 7/16/2010	SB34(4-6) RE72D 7/16/2010	SB34(6-8) RE72E 7/16/2010	SBDUP34(6-8) RE72F 7/16/2010	SB35(0-2) RH01A 8/3/2010	SB35(2-4) RH01B 8/3/2010	SB35(4-6) RH01J 8/3/2010	SB35(6-8) RH01K 8/3/2010	SB36(0-2) RH01D 8/3/2010	SB36(2-4) RH01E 8/3/2010	SB36(4-6) RH01F 8/3/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics											
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB34(2-4) RE72C 7/16/2010	SB34(4-6) RE72D 7/16/2010	SB34(6-8) RE72E 7/16/2010	SBDUP34(6-8) RE72F 7/16/2010	SB35(0-2) RH01A 8/3/2010	SB35(2-4) RH01B 8/3/2010	SB35(4-6) RH01J 8/3/2010	SB35(6-8) RH01K 8/3/2010	SB36(0-2) RH01D 8/3/2010	SB36(2-4) RH01E 8/3/2010	SB36(4-6) RH01F 8/3/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB36(6-8) RH01G 8/3/2010	SB37(0-2) RH01C 8/3/2010	SB38(0-2) RH01H 8/3/2010	SB38(2-4) RH01I 8/3/2010	SB38(4-6) RH01L 8/3/2010	SB38(6-8) RH01M 8/3/2010	SB39(0-2) RH01N 8/3/2010	SB39(2-4) RH01O 8/3/2010	SB39(4-6) RH01P 8/3/2010	SB39(6-8) RH01Q 8/3/2010	SB40(0-2) RH01R 8/3/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.031 U	0.032 U	0.32 U
Aroclor 1242	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.031 U	0.032 U	**5.4**
Aroclor 1248	0.031 U	0.081 U	0.032 U	0.032 U	0.032 U	0.031 U	**0.38**	0.031 U	0.031 U	0.032 U	0.32 U
Aroclor 1254	0.031 U	**0.33**	**0.047**	0.032 U	0.032 U	0.031 U	**0.51**	0.031 U	0.031 U	0.032 U	**3.8**
Aroclor 1260	0.031 U	**0.11**	0.032 U	0.032 U	0.032 U	0.031 U	**0.16**	0.031 U	0.031 U	0.032 U	0.58 U
Aroclor 1221	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.031 U	0.032 U	0.32 U
Aroclor 1232	0.031 U	0.032 U	0.032 U	0.032 U	0.032 U	0.031 U	0.032 U	0.031 U	0.031 U	0.032 U	0.32 U
Total PCBs	0.031 U	**0.44**	**0.047**	0.032 U	0.032 U	0.031 U	**1.05**	0.031 U	0.031 U	0.032 U	**9.2**
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic											
Cadmium											
Chromium											
Copper											
Lead											
Mercury											
Zinc											
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB36(6-8) RH01G 8/3/2010	SB37(0-2) RH01C 8/3/2010	SB38(0-2) RH01H 8/3/2010	SB38(2-4) RH01I 8/3/2010	SB38(4-6) RH01L 8/3/2010	SB38(6-8) RH01M 8/3/2010	SB39(0-2) RH01N 8/3/2010	SB39(2-4) RH01O 8/3/2010	SB39(4-6) RH01P 8/3/2010	SB39(6-8) RH01Q 8/3/2010	SB40(0-2) RH01R 8/3/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB36(6-8) RH01G 8/3/2010	SB37(0-2) RH01C 8/3/2010	SB38(0-2) RH01H 8/3/2010	SB38(2-4) RH01I 8/3/2010	SB38(4-6) RH01L 8/3/2010	SB38(6-8) RH01M 8/3/2010	SB39(0-2) RH01N 8/3/2010	SB39(2-4) RH01O 8/3/2010	SB39(4-6) RH01P 8/3/2010	SB39(6-8) RH01Q 8/3/2010	SB40(0-2) RH01R 8/3/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics											
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB36(6-8) RH01G 8/3/2010	SB37(0-2) RH01C 8/3/2010	SB38(0-2) RH01H 8/3/2010	SB38(2-4) RH01I 8/3/2010	SB38(4-6) RH01L 8/3/2010	SB38(6-8) RH01M 8/3/2010	SB39(0-2) RH01N 8/3/2010	SB39(2-4) RH01O 8/3/2010	SB39(4-6) RH01P 8/3/2010	SB39(6-8) RH01Q 8/3/2010	SB40(0-2) RH01R 8/3/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB41(0-2) RH02A 8/3/2010	SB42(0-2) RH02B 8/3/2010	SB42(2-4) RH02C 8/3/2010	SB42(4-6) RH02G 8/3/2010	SB42(6-8) RH02H 8/3/2010	SB43(0-2) RH02D 8/3/2010	SB43(2-4) RH02E 8/3/2010	Dup of SB43(2-4) SB45(2-4) RH02F 8/3/2010	SB43(4-6) RH02J 8/3/2010	SB43(6-8) RH02K 8/3/2010	SB44(0-2) RH02I 8/3/2010
PCBs (mg/kg)											
Method SW8082											
Aroclor 1016	0.031 U	34 U	36 U	3.3 U	0.032 U	0.031 U	0.23 U	0.031 U	0.032 U	0.032 U	0.15 U
Aroclor 1242	0.031 U	34 U	36 U	3.3 U	0.032 U	0.031 U	0.23 U	0.031 U	0.032 U	**0.036**	0.15 U
Aroclor 1248	**0.96**	**180**	**390**	**70**	**0.037**	**0.062**	**0.71**	**0.61**	**0.26**	0.032 U	**1.9**
Aroclor 1254	**1.1**	**84**	**170**	**30**	0.032 U	**0.084**	**0.54**	**0.41**	**0.14**	0.032 U	**1.2**
Aroclor 1260	0.12 U	34 U	36 U	3.3 U	0.032 U	0.031 U	0.23 U	0.031 U	0.032 U	0.032 U	0.15 U
Aroclor 1221	0.031 U	34 U	36 U	3.3 U	0.032 U	0.031 U	0.23 U	0.031 U	0.032 U	0.032 U	0.15 U
Aroclor 1232	0.031 U	34 U	36 U	3.3 U	0.032 U	0.031 U	0.23 U	0.031 U	0.032 U	0.032 U	0.15 U
Total PCBs	**2.06**	**264**	**560**	**100**	**0.037**	**0.146**	**1.25**	**1.02**	**0.4**	**0.036**	**3.1**
TOTAL METALS (mg/kg)											
Methods SW6010B/SW7471A											
Arsenic											
Cadmium											
Chromium											
Copper											
Lead											
Mercury											
Zinc											
SEMIVOLATILES (mg/kg)											
Method 8270D											
Phenol											
Bis-(2-Chloroethyl) Ether											
2-Chlorophenol											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Benzyl Alcohol											
1,2-Dichlorobenzene											
2-Methylphenol											
2,2'-Oxybis(1-Chloropropane)											
4-Methylphenol											
N-Nitroso-Di-N-Propylamine											
Hexachloroethane											
Nitrobenzene											
Isophorone											
2-Nitrophenol											
2,4-Dimethylphenol											
Benzoic Acid											
bis(2-Chloroethoxy) Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene											
4-Chloroaniline											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB41(0-2) RH02A 8/3/2010	SB42(0-2) RH02B 8/3/2010	SB42(2-4) RH02C 8/3/2010	SB42(4-6) RH02G 8/3/2010	SB42(6-8) RH02H 8/3/2010	SB43(0-2) RH02D 8/3/2010	SB43(2-4) RH02E 8/3/2010	Dup of SB43(2-4) SB45(2-4) RH02F 8/3/2010	SB43(4-6) RH02J 8/3/2010	SB43(6-8) RH02K 8/3/2010	SB44(0-2) RH02I 8/3/2010
Hexachlorobutadiene											
4-Chloro-3-methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethylphthalate											
Acenaphthylene											
3-Nitroaniline											
Acenaphthene											
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran											
2,6-Dinitrotoluene											
2,4-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene											
4-Nitroaniline											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene											
Carbazole											
Anthracene											
Di-n-Butylphthalate											
Fluoranthene											
Pyrene											
Butylbenzylphthalate											
3,3'-Dichlorobenzidine											
Benzo(a)anthracene											
bis(2-Ethylhexyl)phthalate											
Chrysene											
Di-n-Octyl phthalate											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Benzo(a)pyrene											
Indeno(1,2,3-cd)pyrene											
Dibenz(a,h)anthracene											
Benzo(g,h,i)perylene											
1-Methylnaphthalene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB41(0-2) RH02A 8/3/2010	SB42(0-2) RH02B 8/3/2010	SB42(2-4) RH02C 8/3/2010	SB42(4-6) RH02G 8/3/2010	SB42(6-8) RH02H 8/3/2010	SB43(0-2) RH02D 8/3/2010	SB43(2-4) RH02E 8/3/2010	Dup of SB43(2-4) SB45(2-4) RH02F 8/3/2010	SB43(4-6) RH02J 8/3/2010	SB43(6-8) RH02K 8/3/2010	SB44(0-2) RH02I 8/3/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)											
NWTPH-Dx											
Diesel Range Organics											
Lube Oil											
NWTPH-Gx											
Gasoline Range Organics											
VOLATILES (mg/kg)											
Method 8260C											
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride											
Acetone											
Carbon Disulfide											
1,1-Dichloroethene											
1,1-Dichloroethane											
trans-1,2-Dichloroethene											
cis-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone											
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
cis-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
trans-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone (MIBK)											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB41(0-2) RH02A 8/3/2010	SB42(0-2) RH02B 8/3/2010	SB42(2-4) RH02C 8/3/2010	SB42(4-6) RH02G 8/3/2010	SB42(6-8) RH02H 8/3/2010	SB43(0-2) RH02D 8/3/2010	SB43(2-4) RH02E 8/3/2010	Dup of SB43(2-4) SB45(2-4) RH02F 8/3/2010	SB43(4-6) RH02J 8/3/2010	SB43(6-8) RH02K 8/3/2010	SB44(0-2) RH02I 8/3/2010
Ethylbenzene											
Styrene											
Trichlorofluoromethane											
1,1,2-Trichloro-1,2,2-trifluoroethane											
m, p-Xylene											
o-Xylene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
Acrolein											
Methyl Iodide											
Bromoethane											
Acrylonitrile											
1,1-Dichloropropene											
Dibromomethane											
1,1,1,2-Tetrachloroethane											
1,2-Dibromo-3-chloropropane											
1,2,3-Trichloropropane											
trans-1,4-Dichloro-2-butene											
1,3,5-Trimethylbenzene											
1,2,4-Trimethylbenzene											
Hexachlorobutadiene											
Ethylene Dibromide											
Bromochloromethane											
2,2-Dichloropropane											
1,3-Dichloropropane											
Isopropylbenzene											
n-Propylbenzene											
Bromobenzene											
2-Chlorotoluene											
4-Chlorotoluene											
tert-Butylbenzene											
sec-Butylbenzene											
4-Isopropyltoluene											
n-Butylbenzene											
1,2,4-Trichlorobenzene											
Naphthalene											
1,2,3-Trichlorobenzene											
CONVENTIONALS (%)											
Total Solids (EPA160.3)											
Total Organic Carbon (PLUMB81TC)											

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB46(0-2) RH02L 8/3/2010	SB46(2-4) RH02M 8/3/2010	SB46(4-6) RH02N 8/3/2010	SB46(6-8) RH02O 8/3/2010
PCBs (mg/kg)				
Method SW8082				
Aroclor 1016	34 U	0.032 U	0.033 U	0.032 U
Aroclor 1242	34 U	0.032 U	0.033 U	0.032 U
Aroclor 1248	**210**	**0.068**	**1.3**	0.032 U
Aroclor 1254	**110**	**0.037**	**0.49**	0.032 U
Aroclor 1260	34 U	0.032 U	0.033 U	0.032 U
Aroclor 1221	34 U	0.032 U	0.033 U	0.032 U
Aroclor 1232	34 U	0.032 U	0.033 U	0.032 U
Total PCBs	**320**	**0.105**	**1.79**	0.032 U
TOTAL METALS (mg/kg)				
Methods SW6010B/SW7471A				
Arsenic				
Cadmium				
Chromium				
Copper				
Lead				
Mercury				
Zinc				
SEMIVOLATILES (mg/kg)				
Method 8270D				
Phenol				
Bis-(2-Chloroethyl) Ether				
2-Chlorophenol				
1,3-Dichlorobenzene				
1,4-Dichlorobenzene				
Benzyl Alcohol				
1,2-Dichlorobenzene				
2-Methylphenol				
2,2'-Oxybis(1-Chloropropane)				
4-Methylphenol				
N-Nitroso-Di-N-Propylamine				
Hexachloroethane				
Nitrobenzene				
Isophorone				
2-Nitrophenol				
2,4-Dimethylphenol				
Benzoic Acid				
bis(2-Chloroethoxy) Methane				
2,4-Dichlorophenol				
1,2,4-Trichlorobenzene				
Naphthalene				
4-Chloroaniline				

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB46(0-2) RH02L 8/3/2010	SB46(2-4) RH02M 8/3/2010	SB46(4-6) RH02N 8/3/2010	SB46(6-8) RH02O 8/3/2010
Hexachlorobutadiene				
4-Chloro-3-methylphenol				
2-Methylnaphthalene				
Hexachlorocyclopentadiene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenol				
2-Chloronaphthalene				
2-Nitroaniline				
Dimethylphthalate				
Acenaphthylene				
3-Nitroaniline				
Acenaphthene				
2,4-Dinitrophenol				
4-Nitrophenol				
Dibenzofuran				
2,6-Dinitrotoluene				
2,4-Dinitrotoluene				
Diethylphthalate				
4-Chlorophenyl-phenylether				
Fluorene				
4-Nitroaniline				
4,6-Dinitro-2-Methylphenol				
N-Nitrosodiphenylamine				
4-Bromophenyl-phenylether				
Hexachlorobenzene				
Pentachlorophenol				
Phenanthrene				
Carbazole				
Anthracene				
Di-n-Butylphthalate				
Fluoranthene				
Pyrene				
Butylbenzylphthalate				
3,3'-Dichlorobenzidine				
Benzo(a)anthracene				
bis(2-Ethylhexyl)phthalate				
Chrysene				
Di-n-Octyl phthalate				
Benzo(b)fluoranthene				
Benzo(k)fluoranthene				
Benzo(a)pyrene				
Indeno(1,2,3-cd)pyrene				
Dibenz(a,h)anthracene				
Benzo(g,h,i)perylene				
1-Methylnaphthalene				

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB46(0-2) RH02L 8/3/2010	SB46(2-4) RH02M 8/3/2010	SB46(4-6) RH02N 8/3/2010	SB46(6-8) RH02O 8/3/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)				
NWTPH-Dx				
Diesel Range Organics				
Lube Oil				
NWTPH-Gx				
Gasoline Range Organics				
VOLATILES (mg/kg)				
Method 8260C				
Chloromethane				
Bromomethane				
Vinyl Chloride				
Chloroethane				
Methylene Chloride				
Acetone				
Carbon Disulfide				
1,1-Dichloroethene				
1,1-Dichloroethane				
trans-1,2-Dichloroethene				
cis-1,2-Dichloroethene				
Chloroform				
1,2-Dichloroethane				
2-Butanone				
1,1,1-Trichloroethane				
Carbon Tetrachloride				
Vinyl Acetate				
Bromodichloromethane				
1,2-Dichloropropane				
cis-1,3-Dichloropropene				
Trichloroethene				
Dibromochloromethane				
1,1,2-Trichloroethane				
Benzene				
trans-1,3-Dichloropropene				
2-Chloroethylvinylether				
Bromoform				
4-Methyl-2-Pentanone (MIBK)				
2-Hexanone				
Tetrachloroethene				
1,1,2,2-Tetrachloroethane				
Toluene				
Chlorobenzene				

TABLE 1
SOIL ANALYTICAL RESULTS
FOCUSED SOIL INVESTIGATION
NORTH BOEING FIELD

	SB46(0-2) RH02L 8/3/2010	SB46(2-4) RH02M 8/3/2010	SB46(4-6) RH02N 8/3/2010	SB46(6-8) RH02O 8/3/2010
Ethylbenzene				
Styrene				
Trichlorofluoromethane				
1,1,2-Trichloro-1,2,2-trifluoroethane				
m, p-Xylene				
o-Xylene				
1,2-Dichlorobenzene				
1,3-Dichlorobenzene				
1,4-Dichlorobenzene				
Acrolein				
Methyl Iodide				
Bromoethane				
Acrylonitrile				
1,1-Dichloropropene				
Dibromomethane				
1,1,1,2-Tetrachloroethane				
1,2-Dibromo-3-chloropropane				
1,2,3-Trichloropropane				
trans-1,4-Dichloro-2-butene				
1,3,5-Trimethylbenzene				
1,2,4-Trimethylbenzene				
Hexachlorobutadiene				
Ethylene Dibromide				
Bromochloromethane				
2,2-Dichloropropane				
1,3-Dichloropropane				
Isopropylbenzene				
n-Propylbenzene				
Bromobenzene				
2-Chlorotoluene				
4-Chlorotoluene				
tert-Butylbenzene				
sec-Butylbenzene				
4-Isopropyltoluene				
n-Butylbenzene				
1,2,4-Trichlorobenzene				
Naphthalene				
1,2,3-Trichlorobenzene				
CONVENTIONALS (%)				
Total Solids (EPA160.3)				
Total Organic Carbon (PLUMB81TC)				

U = Indicates the compound was undetected at the reported concentration
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an esti
Bold = Detected compound.

APPENDIX B

ARI Standard Operating Procedures

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Standard Operating Procedure

Sonication Extraction
EPA Method 3550B
for
Chlorinated Pesticides and/or PCBs
EPA Methods 8081 and/or 8082

SOP 350S
Revision 009

Revision Date: 2/28/08
Effective Date: 2/28/08

Prepared By:

Jim Hawk

Approvals:

Laboratory / Section Manager

Quality Assurance

Annual Review

SOP Number: 350S

Title: Sonication Extraction EPA Method 3550B for Chlorinated Pesticides and/or PCBs EPA Methods 8081 and/or 8082

The ARI employee named below certifies that this SOP is accurate, complete and requires no revisions

Name	Reviewer's Signature	Date
Jarry M Hawk	Jarry M Hawk	1/17/10

Standard Operating Procedure 350S – Sonication Extraction EPA Method 3550B for Chlorinated Pesticides and/or PCBs EPA Methods 8081 and/or 8082

1. Scope and Application

1.1. This document describes ARI's use of a sonication to prepare solvent extracts of soil or sediment samples for GC-ECD analysis. The SOP is written to meet the requirements of SW-846 Method 3550B. Target analytes are the organochlorine pesticides and polychlorinated biphenyl compounds listed in ARI SOPs 423S (8081A) and 403S (8082). Sample volumes, extraction solvents and extract final volumes may vary depending on the sample matrix or requested concentration reporting limits. Typical extraction parameters are provided in Table 1.

Table 1: Extraction Parameters for ARI SOP 350S

Sample Matrix	Sample weight (g)	Extraction Solvent	Final Extract Volume (mL)
Soil	12 dry	Hexane/Acetone	4.0
Sediment	25 dry	Hexane/Acetone	5.0
Sediment	25 dry	Hexane/Acetone	2.5
Sediment	25 dry	Hexane/Acetone	1.0

2. Summary of the Procedure

2.1. Routine sample weights are listed in Table 1. Modified extraction levels may be required as the GC Supervisor or Organic Extractions Supervisor determines. Such decisions will be based on the project detection limit requirements. Appropriate surrogate and spike levels should be added based on anticipated final effective volume (FEV).

2.2. Samples are measured into glass beakers, appropriate spiking solutions added and extracted into a mixture of 80% Hexane (nC_6) and 20% Acetone (DMK) using a Branson Model 450 Sonifier® equipped with a ¾" Titanium horn.

2.3. The extracts are dried and concentrated to a designated volume using a Kuderna-Danish (KD) concentration apparatus on a water bath and or a TurboVap™ Concentrator.

2.4. Elemental sulfur is removed from the extract using Tetra Butyl Ammonium Sulfite reagent as described in ARI SOP 334S.

2.5. Additional extract clean-up procedures are required. Extracts for PCB analysis only are subjected to Sulfuric acid and/or silica gel cleanup and extracts for pesticide analysis are cleaned up using silica gel. Pesticide extracts to be analyzed only for DDTs may be cleaned up using Sulfuric Acid.

2.6. Extracts to be analyzed for both Pesticides and PCBs are split following the KD concentration and each portion subjected to the appropriate clean-up procedures.

2.7. When a sample is subjected to a single extraction for both pesticide and PCB analyzes, separate spiked QC samples (LCS, LCSD, MS, MSD) must be extracted for each analysis.

2.8. Final extracts are relinquished to the GC laboratory for analysis.

2.9. Extracts produced by this procedure are suitable for Pesticide and/or PCB analysis using GC/ECD.

3. Definitions

3.1. Silica-gel - a regenerative adsorbent with weakly acidic properties which can be used in column chromatography for the separation of analytes from interfering compounds.

3.2. Laboratory Control Sample (LCS) – A sample matrix, free from the analytes of interest, spiked with verified amounts of analyes or a material containing known amounts of analytes. It is generally used to establish intra-laboratory or analyst-specific precision or to assess the performance of all or a portion of the measurement system.

3.3. Matrix Spike (MS): A sample prepared by adding a known mass of target analyte to a specified amount of sample matrix for which an independent estimate of target analyte concentration is available. Matrix spikes are used, to determine the effect of the sample matrix on a method's recovery efficiency.

3.4. Matrix Spike Duplicate (MSD): A second replicate matrix spike prepared in the laboratory and analyzed to obtain a measure of the precision of the recovery for each analyte.

3.5. Method Blank (MB) – A sample of a matrix similar to the batch of associated samples (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

3.6. Surrogate – A substance with properties that mimic the analyte of interest. It is unlikely to be found in environment samples and is added to them for quality control purposes.

3.7. Tetra Butyl Ammonium Sulfite (TBAS) reagent used to remove elemental sulfur from solvent extracts. Preparation of the reagent is described in ARI SOP 334S Sulfur Removal.

4. Interferences

4.1. Standard solutions, solvents or supports materials must not contain extraneous compounds or other chemical interferences. All standards are verified by GC/ECD, GC-FID or GC/MS prior to use. All solvent lots and support materials are checked for purity prior to use.

4.2. Glassware used in the procedure is cleaned and kiln fired as described in ARI SOP 301S. Glassware is rinsed with clean solvent just prior to use.

4.3. Extracting solvent may contain impurities that could interfere with analyses. Use solvents from a supplier's lot that have are verified free of such contaminates.

4.4. Laboratory supplies and equipment are potential sources of interfering contamination. Items such as gloves, bench paper, rubber stoppers should not come into contact with samples or extracts.

4.5. Airborne dust and other debris may contaminate samples. Samples and extracts must be covered at all times.

5. Safety

5.1. The toxicity or carcinogenicity of each reagent used in this SOP are not precisely defined. Treat each compound as a potential health hazard. Reduce exposure to all chemicals to the lowest possible level by whatever means available.

5.2. Always wear appropriate PPE (personal protective equipment) when working in the Organics Extraction Laboratory. Gloves, safety glasses, ear protection, lab coats, respirators, face shields, etc. are provided for your protection. **Use Them**.

5.3. DO NOT attempt to cleanup solvent spills in the laboratory. Immediately evacuate the area and contact a member of the Emergency Response Team (ERT) for assistance.

5.4. Material Safety Data Sheets (MSDS) that outline hazards, exposure limits, treatments and regulatory guidelines are available for all chemicals used in this procedure and should be consulted when such information is required. The MSDS file is located in the central project management area. MSDS are also available online, at http//hazard.com/MSDS/.

5.5. Environmental Samples may contain hazardous material; treat them as potential health hazards.

5.6. Dispose of all unwanted, broken glassware into a broken glassware disposal box. Inspect every piece of glassware prior to use. Do not use glassware that is chipped, cracked, etched, or scratched. Set aside glassware with minor damage for repair.

5.7. Use nitrile (blue) gloves when working with organic solvents; latex gloves are not appropriate for working with methylene chloride or other solvents.

6. Equipment and Supplies

6.1. Equipment

6.1.1. Personal protective equipment (PPE)

6.1.1.1. Gloves

6.1.1.2. Laboratory coat

6.1.1.3. Goggles

6.1.2. Water Bath, Precision Scientific51220042 or equivalent

6.1.3. Ultrasonic device – Branson Model 450 Sonifier® with ¾" titanium horn or equivalent

6.1.4. Zymark TurboVap LV™ (Set at 40℃)

6.1.5. Hamilton gastight syringes: 25µL 50µL, 100µL, 250µL, 1mL, 2.5mL and 5mL

6.1.6. Centrifuge

6.2. Glassware

6.2.1. 70 or 100 mm glass funnel

6.2.2. 100, 400 & 600 mL glass beaker

6.2.3. Erlenmeyer flask, Glass, 500 mL (one for each sample)

6.2.4. Kuderna-Danish concentrating apparatus, glass, single walled with 10mL concentrator tube, 500mL concentrator flask and three-ball Snyder Column

6.2.5. Turbo Tube, glass, 60 mL with 0.5 mL reservoir

6.2.6. Vial, amber glass, 2.5 mL with PTFE lined screw cap

6.2.7. Pasteur Pipette, borosilicate glass, 5 ¾ inch, disposable

6.2.8. 20 mL scintillation vials with PTFE lined cap

6.2.9. 10 x 293 mm micro-column

6.3. Supplies

6.3.1. Glass wool (prepared by heating at 400 ℃ fo r 4 hours)

6.3.2. Boiling Chips – PTFE (Chemware) Prepared by placing them in a beaker of methylene chloride in a ultrasonic bath followed by air drying in a fume hood.

6.3.3. Stainless steel spatula

6.3.4. Wide Sharpie® permanent marker

6.3.5. Green and yellow label tape

6.3.6. KimWipe™

6.3.7. Aluminum weighting dish

7. Reagents and Standards

7.1. Acetone, high purity, Fisher GC Resolv (A928-4) or equivalent

7.2. Hexanes, Fisher Optima (H303-4) or equivalent

7.3. Hexane, high purity, EMD Omnisolv (HX0295-1) or equivalent

7.4. Methylene Chloride, high purity, Fisher GC Resolv (D 154-4) or equivalent

7.5. Concentrated sulfuric acid

7.6. Tetra Butyl Ammonium Sulfite (TBAS) as described in ARI SOP 334S Sulfur Removal

7.7. Anhydrous sodium sulfate, prepared by baking in kiln at 400 for 4 hours

7.8. Silica gel 0% (grade 22, 60-200mesh) activated by baking in kiln at 400 C for 8 hours (See Silica Gel cleanup SOP 302S)

7.9. Organic Free Water (OFW) – ASTM Type 1 Water (18.6 megaohm resistivity) produced using ARI's central water purification system.

7.10. Spiking solutions prepared and verified by the GC laboratory. Verify that all labeling is clear and complete prior to using one of these solutions. Preparation of the solutions is documented in the Reagent Preparation Logbook (Form 10076F)

8. Sample Collection, Preservation, Shipment and Storage

8.1. Solid samples including all soil and sediment are collected in glass containers, transported to the lab and stored at 0℃ to 6℃. Allow samples to equilibrate to ambient temperature prior to extraction.

8.2. Required holding time for all solid samples is 14 days from date of sample collection. Extract solid samples within fourteen days of collection. When holding times are or may be compromised inform your supervisor immediately.

8.3. Some samples are shared with the metals and or the conventionals laboratories. These samples are placed in a share bin in Refrigerator 5. Procedures for sharing samples are outlined in SOP 1019S.

9. Quality Control

9.1. Prior to beginning the extraction process, determine if special procedures are required by reviewing the Special Analytical Requirements Form or other available project documentation.

9.2. One method blank is extracted with each batch of 20 or fewer samples.

9.3. One LCS (spike blank) is extracted with each batch of 20 or fewer samples.

9.4. One matrix spike is extracted with each batch of 20 or fewer TCLP leachates

9.5. Upon client's request, an MS and/or MSD are extracted with a batch of 20 or fewer samples. When there is insufficient sample to prepare the matrix spike analyzes an LCSD may be substituted with the client's consent. Inform the laboratory supervisor when there is not enough sample to prepare a required MS.

9.6. To verify that surrogate and matrix spikes are performed correctly; all spike additions are witnessed and documented by a second laboratory technician.

9.7. Proceed slowly and carefully while extracting samples. Note all problems, concerns, errors or deviations from the standard procedure on an Analyst Notes Form (Form 3056F). What seem to be minor errors or deviations may have a significant impact on the final results. Analyst must report all deviation from standard procedures to the laboratory supervisor as soon as possible. Failure to do so may result in a disciplinary process.

9.8. Label glassware and vials with permanent blue markers.

9.9. Verify sample identification is transferred correctly when transferring or vialing samples and extracts.

9.10. Do not leave extracts unattended on a water bath or in the TurboVap™. Check extracts often when solvent levels are low to ensure extracts do not concentrate to dryness.

9.11. The LIMS Data entry person will review all Extraction Requirement sheets (Form 3002F) and bench sheets before distribution.

9.12. The laboratory supervisor reviews all logbooks for completeness and accuracy monthly.

9.13. The QA section periodically reviews the standard preparation process, including standard bottles, logbooks and standard certificates and traceability to standardized sources.

10. Calibration and Standardization

10.1. Analytical balances are verified daily using the procedure outlined in ARI SOP 1003S "Balance Monitoring".

10.2. Branson Sonifier® function is verified monthly using the procedure outlined in ARI SOP 300S "Organic Extractions Sonicator Function Test".

10.3. Water bath temperatures are documented twice daily, once by the morning shift and once by the evening shift.

11. Procedure

11.1. Prescreen the samples

11.1.1. All samples to be extracted using this procedure are placed in Walk-in Refrigerator 5 by Sample Receiving personnel.

11.1.2. Obtain a blank Analyst Notes Form (Form 3056F) and enter required data on the form. Appendix 22.1 contains example forms.

11.1.3. Checkout samples from Refrigerator 5 and prescreen them using the procedures outlined in ARI SOP 359S "Sample Screening".

11.1.4. The Organics Extraction Laboratory supervisor or his delegate will use the prescreening data to determine the amount of sample to extract and designate a final extract volume.

11.1.5. Extraction requirements for each sample will be recorded on a bench sheet specific for each batch of samples.

11.1.6. Samples will be returned to refrigerator 5 following screening.

11.2. Prepare for extraction

11.2.1. Review the Extraction Requirements Form (3002F) and batch specific bench sheet to determine sample volume to be extracted, final volume requested and any other special requirements.

11.2.2. Remove samples from Extractions Incoming Samples Refrigerator 5 and allow them to warm to room temperature.

11.2.3. Verify the client Identification's with the ARI labels. If the identifications do not match, inform the Organic Extractions Supervisor immediately.

11.2.4. Thoroughly homogenize each sample to assure a representative sub sample is obtained.

11.2.5. Using green label tape mark one appropriate sized glass beaker for each sample with: ARI job number, ARI ID letter(s), and sample type (Pest, PCB, MB, LCS, MS, etc). Include a date for each MB, LCS and LCSD.

11.2.6. Check that the balance you will use has been verified and weight the designated amount (on form 3002F) of homogenized sample into the beaker labeled for that sample. Weight an equivalent amount of cleaned Na_2SO_4 into beakers for each required MB or LCS sample.

11.2.7. Verify that each beaker is accurately labeled with the correct sample ID.

11.3. Spike the Samples – Surrogate standards are added to all samples including MB, LCS and MS. Known concentrations of all target analytes are added to LCS samples and selected target analytes are added to the MS sample(s).

11.3.1. Consult the Extraction Requirements Form (3002F) to determine the spiking solution required and the volume to be added.

11.3.2. Add surrogate spiking solution to all samples including QC analyses (MB, LCS, MS, MD)

11.3.3. The LCS and MS spiking solutions used will depend on the target analytes as follows:

11.3.3.1. **Pesticide analyzes**: Add specified volumes of the solution to all required LCS, LCSD, MS and MSD samples.

11.3.3.2. **Pesticide+PCB Analyzes:** A separate set of QC spike samples are required for each analysis. Add the specified volume of full analyte list pesticide spike to the pesticide QA samples and the specified volume of the PCB spike to the QA samples designated for PCB analysis.

11.3.3.3. **PCB Only Samples:** Add specified volumes of PCB spike solution to all required LCS, LCSD, MS and MSD samples.

11.3.4. To verify that the surrogate spiking is accurate, surrogate and spike addition will be witnessed and documented by a second laboratory technician. **DO NOT spike samples without the presence of a spike witness.**

11.3.5. Pour the designated (Form 3002F) volume of Hexane/Acetone solvent mixture into each sample beaker.

11.3.6. The samples are now ready for extraction.

11.4. Extract the samples

11.4.1. For all samples that will weight less than twenty grams prepare a 70 mm glass funnel by placing a small plug of acetone rinsed glass wool in the bottom of the cone and adding a small amount of Na_2SO_4 on top of the glass wool.

11.4.2. Samples with extracted weight more than 20 grams require a drying column instead of the glass funnel. Prepare a drying column by placing a small glass wool plug at the bottom and filling the tube with approximately 10 cm of anhydrous Na_2SO_4.

11.4.3. Assemble a Kuderna-Danish concentrator flask and a concentrator tube for each sample. Rinse the KD with a small volume of acetone and label the top of the apparatus with the appropriate sample ID using a wide “Sharpie” marker.

11.4.4. Place the funnel in the top of the KD flask or clamp the drying column above the KD flask so that it will drain into the KD apparatus.

11.4.5. Sonicate the samples

11.4.5.1. Samples are sonicated in sound absorbing, vented boxes. Make sure the vent fan is functioning properly before beginning the extraction process.

11.4.5.2. Place the sonicator probe in the beaker so that it protrudes into the solvent but is above the sample matrix.

11.4.5.3. Set the duty cycle on the sonicator to 50% and the timer to 3 minutes.

11.4.5.4. Adjust the sonicator power output to assure thorough sample mixing with each sonic pulse. Make sure the entire sample is well stirred from top to bottom with each pulse. This normally requires a power setting of between 4 and 10.

11.4.5.5. When the timer shuts off the sonicator, pour the solvent extract through the appropriate funnel into a pr-rinsed, pre-labeled KD apparatus for samples that weight less than 20 g or into a solvent rinsed, pre-labeled 500 mL Erlenmeyer flask for samples greater than 20 g.

11.4.5.6. Repeat steps 11.4.5.1 through 11.4.5.5 two more times, extracting the sample with three separate aliquots of solvent.

11.4.5.7. Rinse the extraction beaker with a small amount of solvent mixture and pour the rinse through the appropriate funnel into a KD or into the labeled Erlenmeyer flask.

11.4.5.8. Discard extracted sample and spent Na_2SO_4 into waste containers designated for solvent contaminated solids.

11.4.5.9. When the sample extraction is complete, pour the contents of each Erlenmeyer flask through the appropriate drying column into a KD flask and rinse the drying column with a small volume of solvent mixture.

11.4.6. Concentrate and exchange the extract.

11.4.6.1. Place two or three Teflon boiling chips in each KD flask.

11.4.6.2. Place an Acetone rinsed, three-ball Snyder column on each KD and place the apparatus into a 90-100 ℃ water bath.

11.4.6.3. Wet the inside of the Snyder column with 1 to 2 mL Acetone before the solvent begins to boil.

11.4.6.4. When the solvent begins to boil, the glass balls in the Snyder column should chatter consistently and not retain excessive solvent.

11.4.6.5. When the extract volume is reduced to between 4 and 6 mL add 40 mL Hexane directly to the KD by pouring it through the Snyder column. Homogenize the solvent well by swirling the entire KD apparatus. Place an "X" on the extract label to note that solvent exchange has occurred.

11.4.6.6. Continue concentrating the sample extract until it is reduced to approximately 8 mL.

11.4.6.7. Remove the KD apparatus from the water bath and place it on a rack to cool for about 10 minutes.

11.4.6.8. When cooled, remove the Snyder column, then the KD flask from the concentrator tube. Rinse the KD flask into the concentrator tube with a small volume of **Hexane**.

11.4.6.9. Pour the Hexane extract into a Turbo Tube using a small volume of Hexane to rinse the concentrator tube into the Turbo Tube.

11.4.6.10. Verify that all turbo tubes are labeled with the sample ID **at the top** with a <u>wide</u> permanent sharpie pen.

11.4.6.11. Insert the turbo tubes into a TurboVap™ tray, filling unused spaces with empty 60 mL VOA vials to prevent the water from splashing.

11.4.6.12. Position the tray in a TurboVap™ set at **40 ℃** .

11.4.6.13. Select the row of Nitrogen nozzles to be used by pressing the row panel on the TurboVap™.

11.4.6.14. Set the timer on the TurboVap™ for 5 minutes initially. The time should be adjusted based on the analyst's prior experience.

11.4.6.15. Close the lid of the TurboVap and slowly make sure the pressure of the nitrogen is up to maximum PSI. The extract should not be splashing.

11.4.6.16. Concentrate the extracts to the volume specified on the Extraction Requirements Form (3002F). Additional 1-5 minute intervals may be required to complete the concentration. A minimum 4 mL extract volume is required for clean-ups.

11.4.6.17. When extracts reach the specified extract volume, open the Turbo-Vap reducing the pressure meter reads 0 PSI.

11.4.6.18. Immediately lift the TurboVap tray containing the extracts out of the TurboVap. Wipe excess water from the outside of the turbo tubes.

11.4.6.19. Concentration and Hexane exchange of the extract is complete and it is ready for clean-up.

11.5. Extract Clean-up

11.5.1. All extracts must be treated with Tetra Butyl Ammonium Sulfite (TBAS) as described in ARI SOP 334S to remove elemental Sulfur.

11.5.2. **Pesticide extracts:**

11.5.2.1. Following Sulfur removal, perform a silica gel clean-up as described in SOP 302S.

11.5.2.2. Following silica gel clean-up return extracts to the TurboVap and concentrate to the volume specified on the Extractions Requirement Form (3002F)

11.5.2.3. Transfer the final extract to an autosampler vial.

11.5.3. **Pesticide+PCB Analyzes:** When pesticide and PCB analyzes are co-extracted the extracts are split and the aliquots cleaned-up separately as either pesticide (Section 11.5.2) or PCB (Section 11.5.4) extracts.

11.5.4. **PCB only extracts:**

11.5.4.1. Following Sulfur removal, perform a sulfuric acid clean-up as described in SOP 335S.

11.5.4.2. Following sulfuric acid clean-up return extracts to the TurboVap and concentrate to the volume specified on the Extractions Requirement Form (3002F).

11.5.4.3. Silica gel clean up is optional for PCB extracts and is performed following acid clean up. Silica gel clean up may be specified on the Special Requirements Form (Form 3002F) or indicated by problematic extracts, i.e. those that appear dark or required more acid cleanup than normal. Analysts must initiate discussions with the Extractions supervisor or lead when potentially problematic extracts are observed.

11.6. When required extract clean-ups are completed, transferred the final extract to an autosampler vial for GC-ECD analysis.

11.6.1. When the final volume is > 1mL, homogenize the final extract well and transfer 1 mL directly to a 2.5 mL amber vial with a PTFE lined crimp cap labeled with the sample ID.

11.6.2. When the final volume is ≤ 1mL the extract may require volume reduction.

11.6.2.1. Transferred the extract to a pre-labeled, hexane rinsed turbo tube using a 5 ¾" Pasteur pipette.

11.6.2.2. Rinse the extract container and Pasteur Pipette with Hexane and transfer the rinsate into the turbo tube.

11.6.2.3. Concentrate the extract to a volume slightly less than that specified on Form 3002F using the procedures in Sections 11.4.6.10 through 11.4.6.18.

11.6.3. Using the appropriate size syringe, bring the extract to the final volume specified on the Extraction Requirements Form (3002F) with Hexane.

11.6.4. Transfer the extract to a 2.5mL amber vial with a PTFE lined crimp cap (labeled with the sample ID) for GC/ECD analysis.

11.6.5. Rinse the syringe three times with methylene chloride and once with Hexane between each extract.

12. Data Analysis and Calculations

12.1. Not Applicable

13. Method Performance

13.1. QA maintains control charts for the recovery of surrogate standards and spiked compounds.

13.2. Management periodically reviews the charts to detect and correct any negative trends in analyte recovery.

14. Pollution Prevention

14.1. Do not discard solvent contaminated solid material into trash containers. Place the solids in the designated 5-gallon “satellite accumulation stations” located at various places in the laboratory. This includes spent sodium sulfate, glass wool, solid sample, silica gel and paper wipes. Transfer the solids to a 55-gallon drum in the Hazardous Waste Room when the accumulation pails are full.

14.2. Do not discard organic solvent into the sink. Pour all waste solvent into the labeled 55-gallon drum located in the Hazardous Waste Storage Area.

14.3. Disposed expired standards into the designated barrel in the hazardous waste room.

14.4. Samples that are designated as hazardous waste by the LIMS “Hazardous Report” must be placed in the designated drum in the Hazardous Waste Storage Area when they are disposed. This process is described in SOP 1003S.

15. Data Assessment and Acceptance Criteria for Quality Control Measures

15.1. Not Applicable

16. Corrective Actions for Out of Control Events

16.1. Promptly report any events that may compromise the extraction process to the Organic Extractions Supervisor who will take appropriate steps to insure data quality. Corrective actions

may include, but are not limited to, notation on the Analyst Notes Form (3056F) or re-extraction of the sample.

16.2. Corrective action procedures for common laboratory issues are provided in the diagrams provided in Section 20.1.

17. Contingencies for Handling Out-of-Control or Unacceptable Data

17.1. Unacceptable QA data noted during GC or GCMS analysis may result in a request for re-extraction using a 'Request for Re-extraction/Re-analysis Form (Form 0030F). Re-extract parameters (sample volume, final volume etc.) may be modified from the original extraction based on analytical results.

18. Waste Management

18.1. Place the solids in the designated 5-gallon "satellite accumulation stations" located at various places in the laboratory. This includes spent sodium sulfate, glass wool, solid sample, silica gel and paper wipes. Transfer the solids to the 55-gallon drum labeled "Solvent Contaminated Solids" located in the Hazardous Waste Room when the accumulation pails are full.

18.2. Discard all waste solvent (Hexane and Methylene Chloride) into the 55 gallon drum labeled "Chlorinated Solvents" located in the Hazardous Waste Storage Area

18.3. Disposed expired standards into the designated barrel in the hazardous waste room.

18.4. Place samples that designate as hazardous using the LIMS "Hazardous Report" in the designated drum in the Hazardous Waste Storage Area when they are disposed. SOP 1003S describes the process for disposal of samples. Excess extracts and expired spiking solutions must be disposed of in the container labeled "Chlorinated Solvents" located in the Hazardous Waste Storage Area.

18.5. ARI's Laboratory Chemical Hygiene Plan (CHP) describes internal hazardous waste handling procedures. All analysts must be familiar with these requirements.

18.6. ARI properly profiles and disposes all hazardous waste using an EPA registered TSD (Treatment, Storage and Disposal) facility.

19. Method References

19.1. SW-846, "Ultrasonic Extraction", Method 3550-B, Revision 2, December, 1996. USEPA Test Methods for Evaluating Solid Waste, (SW-846, 3rd Edition)

20. Appendices

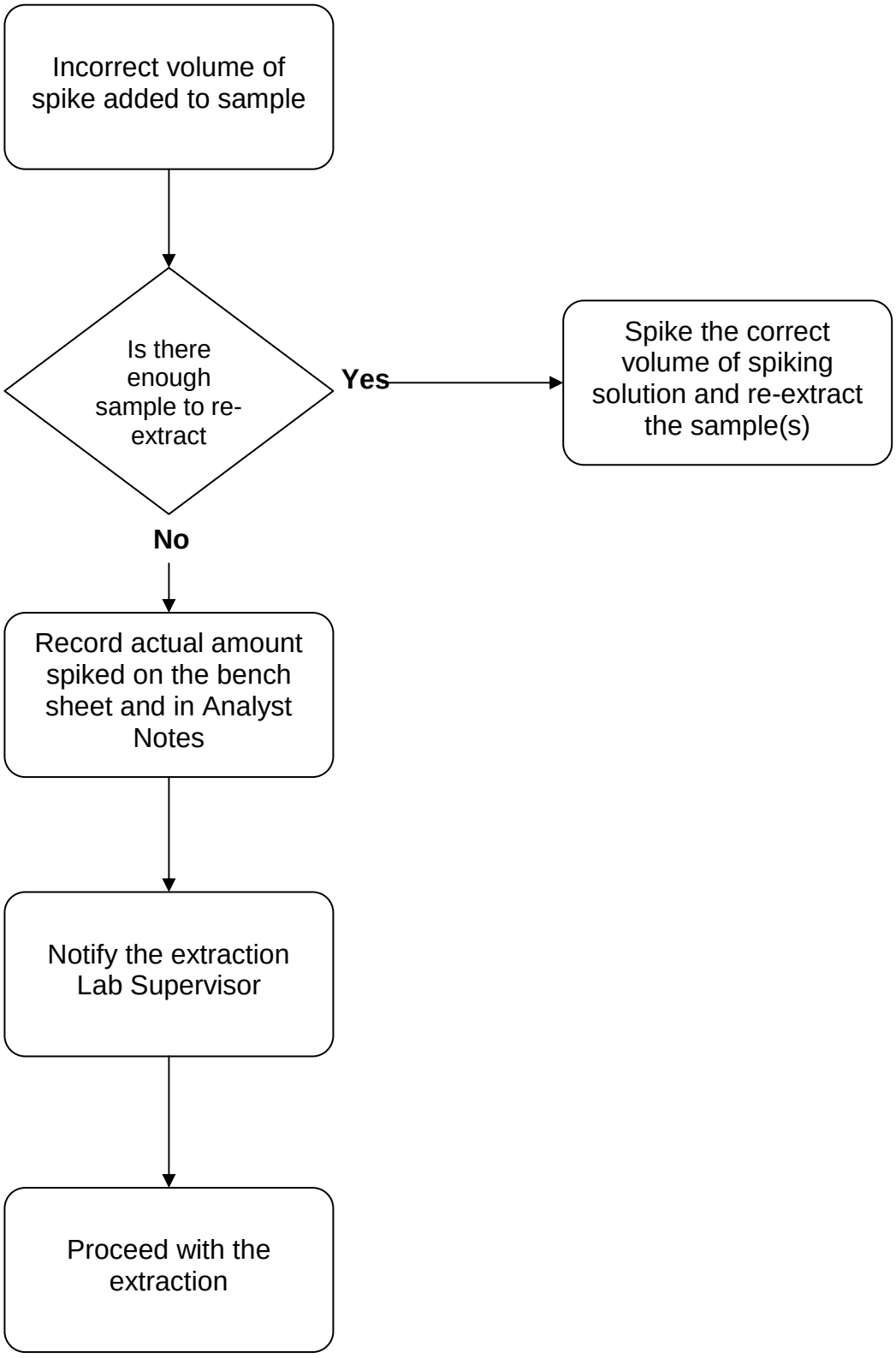
20.1. Corrective Actions

20.2. Forms

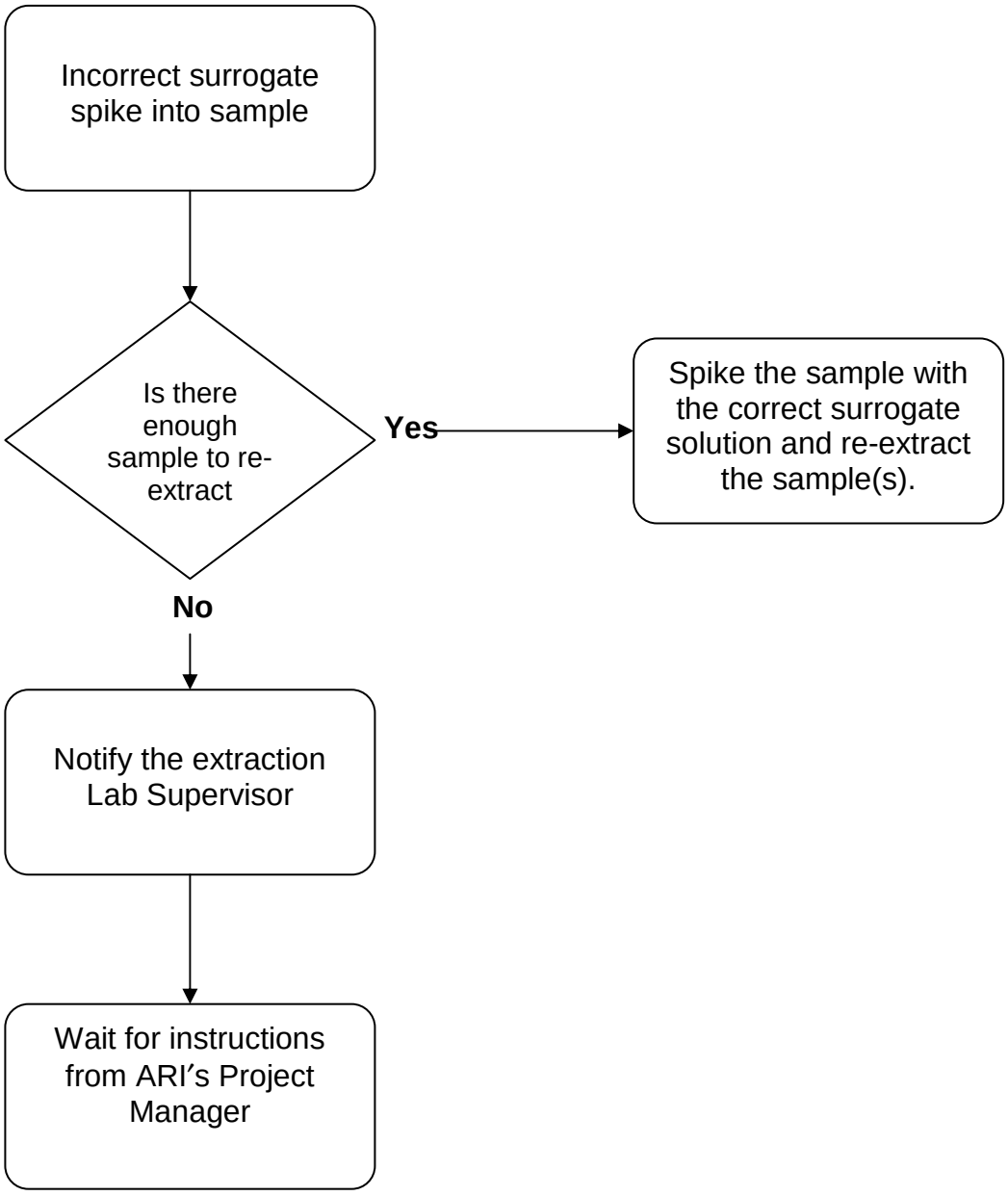
Appendix 20.1

Corrective Action Charts

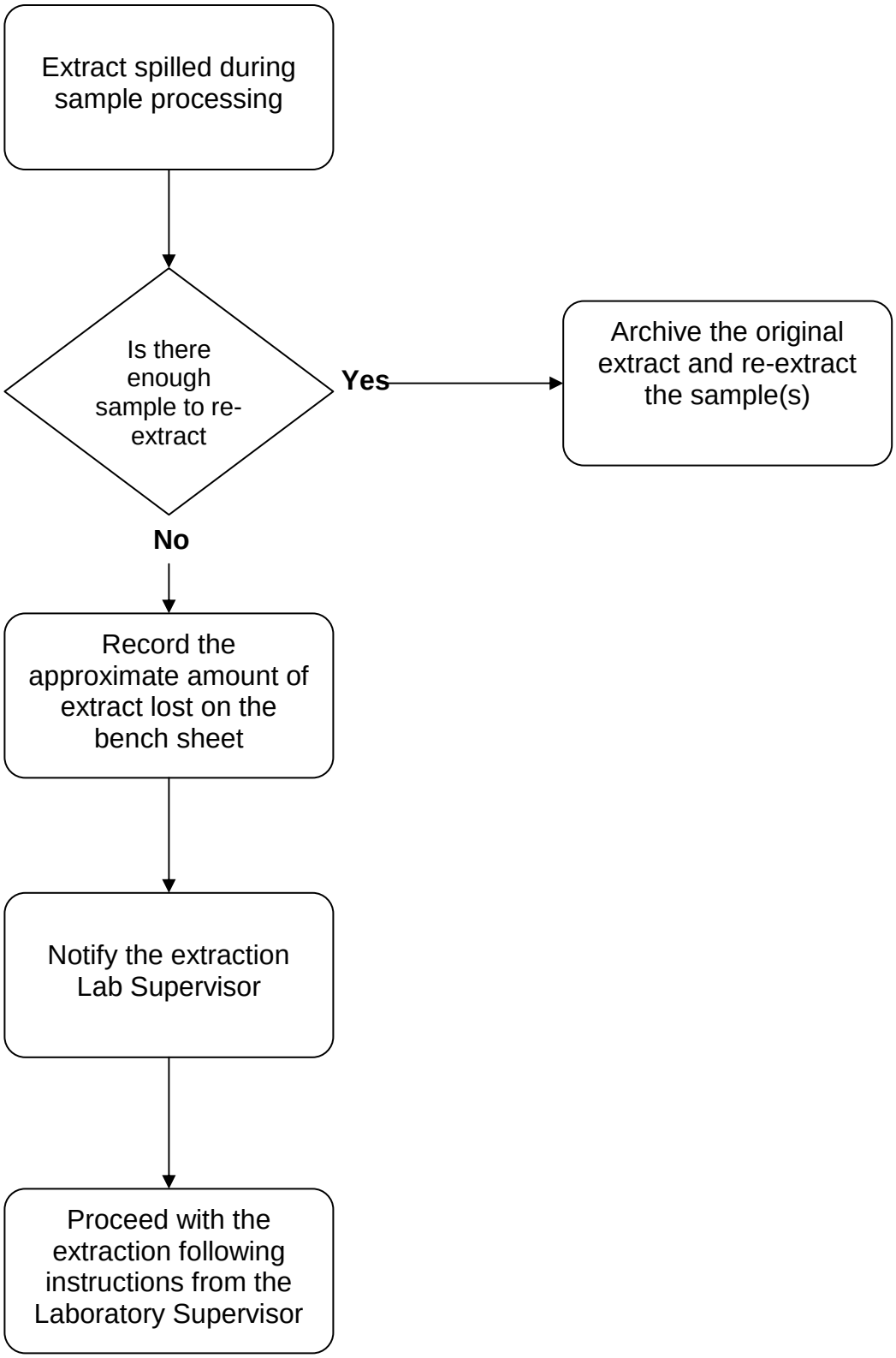
Corrective Action for Incorrect Spike Volume



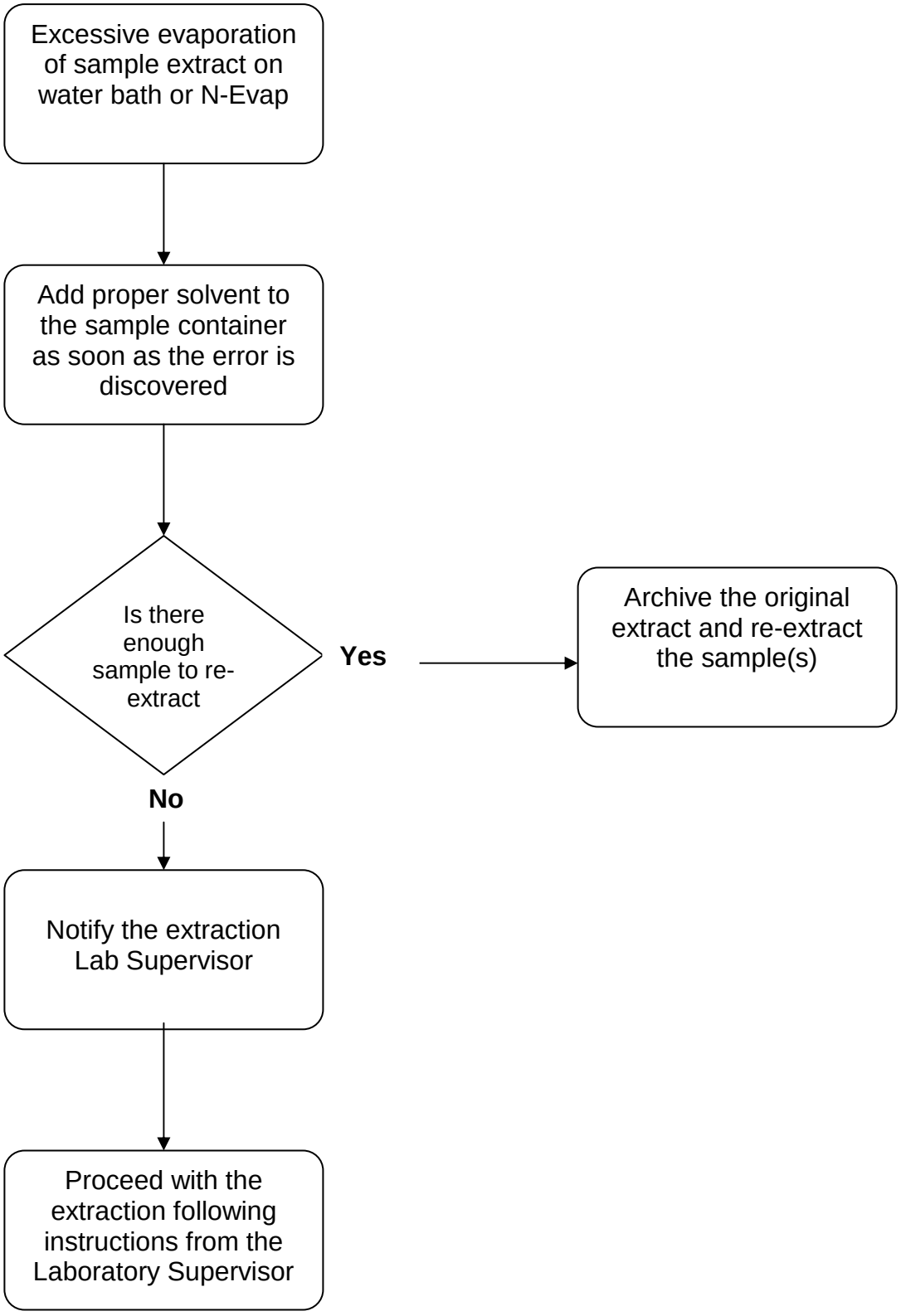
Corrective Action for Incorrect Surrogate Addition



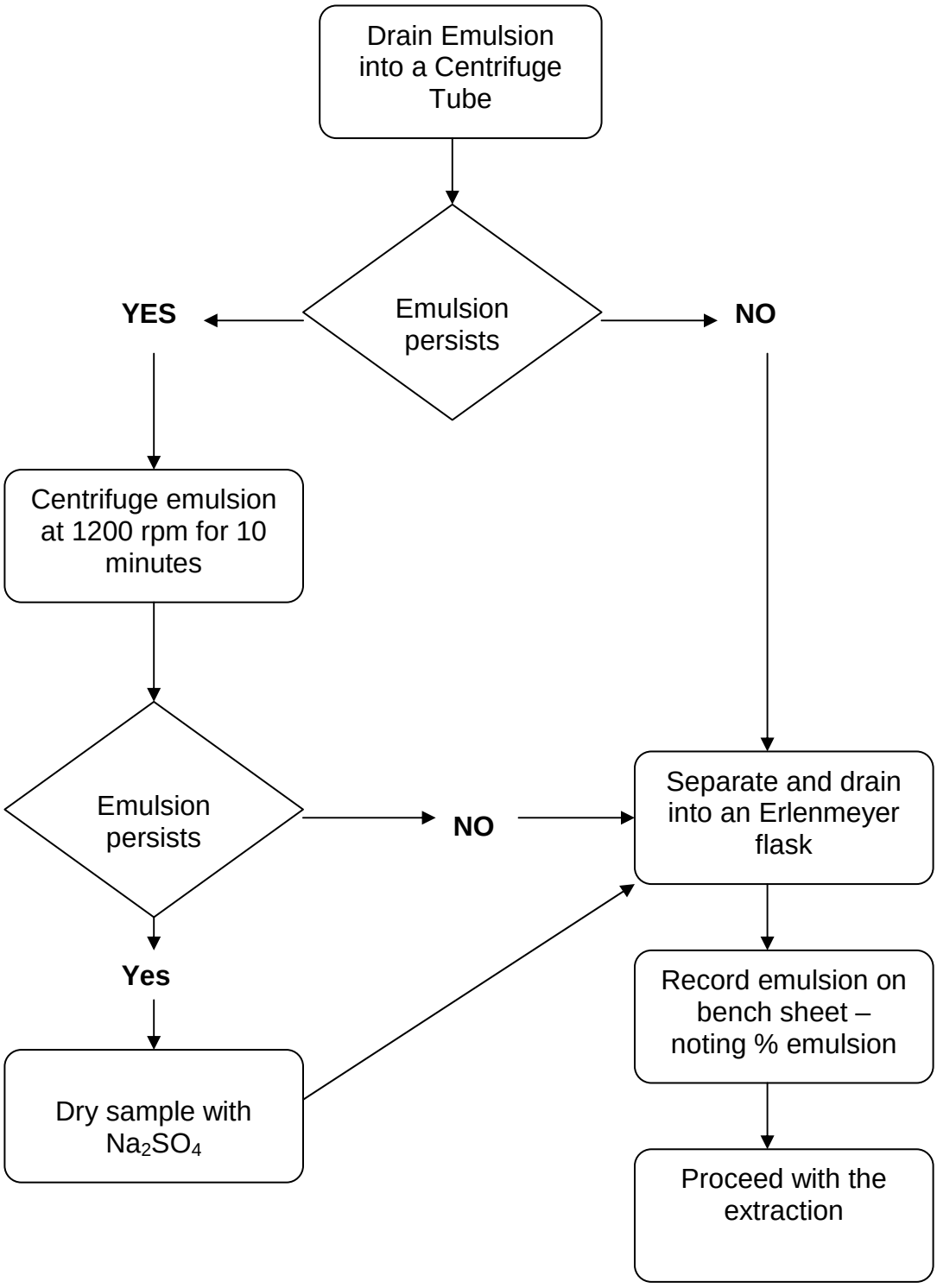
Corrective Action for an Extract Spill



Corrective Action for Loss of Sample on water Bath or N-Evap



Corrective Action for Emulsions



Appendix 20.1

Forms

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

Pest / PCB – Water/TCLP

In-House ☐ MTCA ☐ Low Level ☐
QA LIMs # _____ Manchester ☐
EXT LIMs # _____ Sep Funnel ☐
Bid # _____ KD ☐
ARI Job No(s) _____ TurboVap ☐

Client Name / Project ID _____

Extraction Requirements	Verify Client ID	Volume Extracted	Silica Gel (Pest)	Acid Clean (PCB) Y / N	Sulfur Clean Y / N	Final Effective Volume	Volume to Lab	PH 5-9 Y / N	Comments
MB:									
SB:									
Analyst/Date:									

Spike	Spike ID	Volume	Conc	Analyst	Witness	Solvent / Reagent	ID
Surrogate		µL	µg/mL			CH_2Cl_2 (DCM):	
LCS		µL	µg/mL			C_6H_{14} (Hexane):	
LCS(extra)		µL	µg/mL			Na_2SO_4:	
		µL	µg/mL			TBAS:	
MS/MSD		µL	µg/mL			Ethyl Acetate:	
Extraction Time:						(0%) Silica or H_2SO_4:	
Manchester::		Start:		Stop:		Na_2SO_3:	

3018F

Revision 014
01/04/2007

APPENDIX C

Health and Safety Plan

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

WORK LOCATION PERSONNEL PROTECTION AND SAFETY EVALUATION FORM

Attach Pertinent Documents/Data
Fill in Blanks As Appropriate

Job No.:	025082.210.002		
Prepared by:	Ken Reid	Reviewed by:	Chris Kimmel
Date:	September 8, 2008	Date:	September 10, 2008
Updated by:	Colette Griffith	Reviewed by:	Kristy Hendrickson
Date:	June 25, 2010	Date:	June 25, 2010

A. WORK LOCATION DESCRIPTION

1. **Project Name:** Boeing – North Boeing Field (NBF)
2. **Location:** Seattle, Washington
3. **Anticipated Activities:** Collecting subsurface soil samples using direct-push methods and hand-auger techniques, collecting samples from storm drain structures, collecting wipe samples, performing surface cleaning of asphalt and concrete material, removing asphalt, excavating soil.
4. **Size:** Approximately 10 Acres
5. **Surrounding Population:** Industrial, some commercial
6. **Buildings/Homes/Industry:** Industrial and commercial
7. **Topography:** Mostly flat, sloping gently to the west
8. **Anticipated Weather:** Possible rain, 40 to 70 degrees F.
9. **Unusual Features:** None, possible metal, brick, or wood in subsurface.
10. **Site History:** PCBs have been found in or near NBF, which includes aerospace manufacturing, at the adjacent Georgetown Steam Plant, and in the sediments of Slip 4. Activities on or near the NBF property include various industrial activities and aircraft landing and taxiing.

B. HAZARD DESCRIPTION

1. Background Review: ☒ Complete ☐ Partial

If partial, why?

2. Hazardous Level: ☐ B ☐ C ☒ D ☐ Unknown

Justification: Past work at site: Numerous investigations in and around the North Boeing Field.

3. Types of Hazards: (Attach additional sheets as necessary)

A. ☒ Chemical ☒ Inhalation ☐ Explosive
☐ Biological ☒ Ingestion ☐ O2 Def. ☒ Skin Contact

Describe: Contact with contaminated soil, groundwater, surface water, or sediment. Inhalation of dust or vapors. Ingestion of dust.

B. ☒ Physical ☒ Cold Stress ☒ Noise ☒ Heat Stress ☐ Other

Describe: Hazards associated with work around heavy machinery, including street sweeping vehicles and excavation equipment. Special care must be taken (i.e., placement of reflective cones) when working near or around open storm drain structures to prevent trips and falls. Depending on the weather conditions, heat stress or cold stress may be a factor.

C. ☐ Radiation

Describe:

4. Nature of Hazards:

☒ Air	Describe: Dust from contaminated soil and solids (once dry).
☒ Soil/Sediment	Describe: Dermal contact with or ingestion of contaminated soil and solids.
☒ Surface Water	Describe: Dermal contact with or ingestion of contaminated water in storm drain structures or decontamination water.
☐ Groundwater	Describe:
☐ Other	Describe:

5. Chemical Contaminants of Concern ☐ N/A

Contaminant	Hazards Encountered Upland or Offshore?	PEL-TWA (mg/cu.m)	I.D.L.H. (mg/cu.m)	Source/Quantity Characteristics	Route of Exposure	Symptoms of Acute Exposure	Instruments Used to Monitor Contaminant
PCBs	Soil and storm drain system solids	0.001	5	Concentrations in soil and solids from non-detect to greater than 50 parts per million (ppm)	Dust Inhalation, Ingestion, Dermal Contact, Absorption	Eye irritation, liver damage, carcinogen	N/A
PAHs	Soil and storm drain system solids	0.2	Unknown	Possible fuel releases	Inhalation, Absorption, Dermal Contact	Dermatitis, bronchitis, carcinogen	N/A
Bis [2-ethylhexyl] phthalate	Soil and storm drain system solids	5.0 ppm	10.0 ppm	Possible fuel releases, or stormwater discharges	Inhalation, Ingestion, Dermal Contact, Absorption	Eye irritation, mucous membranes, liver damage, teratogen, carcinogen	N/A

6. Physical Hazards of Concern ☐ N/A

Hazard	Description	Location	Procedures Used to Monitor Hazard
Falling	Falls or trips into open storm drain structures	At the edges of storm drain structures	Do not leave storm drain structures open and unattended. Use reflective cones near the edges of open storm drain structures
Drilling Equipment	Falling or swinging objects, flying debris, rotating augers	At the back of the probe rig within about a 10-ft radius.	Be observant. Minimize time spent close to the probe rig.
Excavation Equipment	Crushing by machinery, flying debris	Within the swing radius of equipment and proximity to moving parts	Be observant. Minimize time spent close to the excavation machinery.
Aircraft	Work locations may be near flight line where moving aircraft may be present.	Near the flight line at North Boeing Field.	Be observant. Minimize time spent near the flight line. Do not enter flight line areas without proper escorts.

7. Work Location Instrument Readings ☒ N/A

Location: _____

Percent O_2: _____ Percent LEL: _____

Radioactivity: _____ PID: _____

FID: _____ Other: _____

Other: _____ Other: _____

Other: _____ Other: _____

Location: _____

Percent O_2: _____ Percent LEL: _____

Radioactivity: _____ PID: _____

FID: _____ Other: _____

Other: _____ Other: _____

Other: _____ Other: _____

Location: _____

Percent O_2: _____ Percent LEL: _____

Radioactivity: _____ PID: _____

FID: _____ Other: _____

Other: _____ Other: _____

Other: _____ Other: _____

Location: _____

Percent O_2: _____ Percent LEL: _____

Radioactivity: _____ PID: _____

FID: _____ Other: _____

Other: _____ Other: _____

Other: _____ Other: _____

8. Hazards Expected In Preparation For Work Assignment ☒ N/A

Describe:

C. PERSONAL PROTECTIVE EQUIPMENT

1. Level of Protection During *Sediment Sampling and Processing Activities and Oversight of Contractor Cleaning Activities*

☐ A ☐ B ☐ C ☒ D

Location/Activity: All

2. Protective Equipment During *Soil Sampling* (specify probable quantity required)

Respirator ☐ N/A

- ☐ SCBA, Airline
- ☐ Full-Face Respirator
- ☐ Half-Face Respirator
- ☐ Escape mask
- ☐ None
- ☐ Other:
- ☐ Other:

Clothing ☐ N/A

- ☐ Fully Encapsulating Suit
- ☐ Chemically Resistant Splash Suit
- ☐ Apron, Specify:
- ☐ Tyvek Coverall or Raingear
- ☐ Saranex Coverall
- ☐ Coverall, Specify
- ☐ Other: life jacket while on boat

Head & Eye ☐ N/A

- ☒ Hard Hat
- ☐ Goggles
- ☐ Face Shield
- ☒ Safety Eyeglasses
- ☐ Other:

Hand Protection ☐ N/A

- ☒ Undergloves; Type: Nitrile
- ☐ Gloves; Type: Solvex
- ☐ Overgloves; Type:
- ☐ None
- ☐ Other:

Foot Protection ☐ N/A

- ☒ Neoprene Safety Boots with Steel Toe/Shank
- ☐ Disposable Over-boots
- ☒ Other: Steel Toe Work Boots

3. Monitoring Equipment ☐ N/A

- ☐ CGI
- ☐ O^2 Meter
- ☐ Rad Survey
- ☐ Detector Tubes (optional)

Type:

- ☒ PID ??
- ☐ FID
- ☐ Other

D. PERSONNEL DECONTAMINATION (ATTACH DIAGRAM)

☒ Required- Soap and Water - Hands ☐ Not Required

EQUIPMENT DECONTAMINATION

☒ Required ☐ Not Required

If required, describe and list equipment:
Any non-disposable sampling equipment will be washed with tap water and Alconox, and rinsed with tap water, prior to each use.

E. PERSONNEL

	Name	Work Location Title/Task	Medical Current	Fit Test Current
1.	**Colette Griffith**	**Senior Staff Engineer**	☒	☒
2.	**Alan Starr**	**Senior Technician**	☒	☒
3.	**Martin Valeri**	**Staff Engineer**	☒	☒
4.	**Chris Burke**	**Senior Staff Hydrogeologist**	☒	☒
5.			☐	☐
6.			☐	☐
7.			☐	☐
8.			☐	☐
9.			☐	☐
10.			☐	☐

Site Safety Coordinator: **Alan Starr**

F. ACTIVITIES COVERED UNDER THIS PLAN

Task No.	Description	Preliminary Schedule
1	Surface and soil cleanup	Spring 2010
2	Storm drain structure sampling events	Spring – Summer 2010
3	Storm drain structure cleaning	Spring – Fall 2010
4	Soil and groundwater investigation	Summer – Fall 2010

G. SUBCONTRACTOR'S HEALTH AND SAFETY PROGRAM EVALUATION ☐ N/A

Name and Address of Subcontractor: PSC

Cascade Drilling
PO Box 1184
Woodinville, WA 98072

EVALUATION CRITERIA

Item	Adequate	Inadequate	Comments
Medical Surveillance Program	☒	☐	
Personal Protective Equipment Availability	☒	☐	
Onsite Monitoring Equipment Availability	☒	☐	
Safe Working Procedures Specification	☒	☐	
Training Protocols	☒	☐	
Ancillary Support Procedures (if any)	☒	☐	
Emergency Procedures	☒	☐	
Evacuation Procedures Contingency Plan	☒	☐	
Decontamination Procedures Equipment	☒	☐	
Decontamination Procedures Personnel	☒	☐	

GENERAL HEALTH AND SAFETY PROGRAM EVALUATION: ☒ Adequate ☐ Inadequate

Additional Comments: Review based on terms of Basic Subcontractor Agreement with Landau Associates, previous experience with subcontractor, and subcontractor's experience at the site.

Evaluation Conducted By: _____ Date: _____

EMERGENCY FACILITIES AND NUMBERS

Hospital:
Harborview Medical Center
325 9th Ave, Seattle, WA
Seattle, WA 98104
(206) 744-3000

Telephone:
Boeing Emergency Line (if on Boeing property) – 206-655-222
Emergency Transportation Systems (Fire, Police, Ambulance) – 911
Harborview Medical Center – 206-744-3000

Emergency Routes – Map (Attached)

Emergency Contacts:

Landau Associates Project Manager (Kristy Hendrickson)	425-778-0907
Boeing Environmental Affairs Project Contact (Carl Bach)	206-898-0438

In the event of an emergency, do the following:

1. Call for help as soon as possible. Call 911. Give the following information:
   - WHERE the emergency is – use cross streets or landmarks
   - PHONE NUMBER you are calling from
   - WHAT HAPPENED – type of injury
   - WHAT is being done for the victim(s)
   - YOU HANG UP LAST – let the person you called hang up first.

2. If the victim can be moved, paramedics will transport to the hospital. If the injury or exposure is not life threatening, decontaminate the individual first. If decontamination is not feasible, wrap the individual in a blanket or sheet of plastic prior to transport.

3. Notify the Landau Associates project manager.

4. Notify the Boeing Environmental Affairs Project Contact.

HEALTH AND SAFETY PLAN
APPROVAL/SIGN OFF FORMAT

I have read, understood, and agreed with the information set forth in this Health and Safety Plan (and attachments) and discussed in the Personnel Health and Safety briefing.

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Site Safety Coordinator	Signature	Date
Landau Health and Safety Manager	Signature	Date
Project Manager	Signature	Date

Personnel Health and Safety Briefing Conducted By:

Name	Signature	Date

ATTACHMENT A

ACTION LEVELS FOR RESPIRATORY PROTECTION

Monitoring Parameter	Reading	Level of Protection

ROUTE TO HOSPITAL

Route to Harborview Medical Center Hospital

DIRECTIONS

1. Start out going SOUTHEAST on E MARGINAL WAY S toward S NORFOLK ST.
2. Turn LEFT onto S BOEING ACCESS RD.
3. Merge onto I-5 N toward SEATTLE.
4. Take the DEARBORN ST. / JAMES ST. exit- EXIT 164A- toward MADISON ST
5. Take the JAMES ST exit.
6. Turn RIGHT onto JAMES ST.
7. Turn right on Boren Avenue and drive 3 blocks to Broadway
8. Turn right, and then make a quick right turn onto Alder St
9. Continue for three blocks to 8th Avenue